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Original Articles

MEDICAL FEES IN COUNTRY PRACTICE.*

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At no time in the history of this country has general prosperity among our people been on so high a plane. To whatever preponderating cause theorists may attribute this fact, it must be admitted by all that one of the chief of those advanced is the financial independence of the American farmer. To him we owe the origin of a large proportion of all wealth. From him we expect the purchase, utilization and consumption of products and manufactures applied in his supplemental sustenance and as a means toward the accomplishment of his work and the comforts of his home. Between him and the source of his purchased needs is that great army of so-called middlemen inhabiting the great cities, manufacturing centers and the country towns and villages, whose very life is largely, if not completely, dependent on the tiller of the soil.

When the American farmer is prosperous, prosperity is general. In time of drouth, the manufacturer, the merchant and the coupon cutter experience adversity. Cities destroyed completely by Nature's freaks and fires rise again in the night, grander, loftier and more attractive than ever. Destruction of the tillable soil by whatever cause means devastation, poverty and distress, possibly for all time. There is no prosperity so continuous, so substantial and so elevating to mankind as that whose foundation is laid by the man, who, profiting by his knowledge of natural laws, digs out of the ground that which goes to support his fellow-man. To this account more than any other may be laid the wonderful accomplishment of this republic in a trifle over one hundred years, occupying to-day probably the foremost position among the nations of the earth.

The prosperity of the farmer affects directly the middlemen in his nearby town. When the farmer has plenty to sell at good prices, the banker, preacher, storekeeper, druggist, carpenter, painter and saloonman are kept busy in his wake. The result is more work, better returns and a general advance in the material development of the town. These thoughts, with the knowledge which has come to me of the fees charged by physicians in country practice, have led to the query: Does the country doctor participate in the benefits which accrue to his fellow-townsmen, because of the material advancement of the farmer, in like degree? In other words, has his income from his practice kept pace with the times? Is he receiving the remuneration commensurate with the increased cost of his education, with the advance in the price of his necessities, the hard work and responsibilities of his calling?

* Read before the Nebraska State Medical Society, Lincoln, May 3, 1906.

PHYSICIANS' FEES.

In a somewhat extended association with the physicians of Nebraska and western Iowa, I have come to learn something of the details of their work, the trials of their life and their compensation for service. Two facts ascertained have impressed me, one, the uniformity of their fees, and the other the low prices charged. For instance, inquiries of men, practicing in Iowa, north, east, central and southern Nebraska, in towns of 1,500 or less, showed up a schedule about as follows: Day visit in town, $1.00; office consultation and prescription, 50 cents; visits in the country, mileage one way only, 50 cents, and in some instances (a minority) $1.00 in addition for the call; obstetric attendance, $10.00 in the country and a few reported mileage 50 cents in addition. Many make no additional charge for instrumental deliveries, and those who did made a fee of $5.00 in addition. An extra charge for night work of any kind was a rarity, and the fees were not affected by storm, deep mud or other influences occasioning delay and undue exposure.

Individual reports, particularly of obstetric experience, were interesting, and some of which indicated a disposition to charge less than the schedule. I will recite one in point: Dr. T. was called four miles from town to assist Dr. B., who had been with a primipara twelve hours. Forceps had been applied at the inferior strait without result after prolonged effort. After examination and consultation, Dr. B. gave an anesthetic, Dr. T. applied the forceps and in an hour later delivered the child with a considerable perineal tear, which was repaired. Two weeks later Dr. B. asked Dr. T. what his fee was. He replied: "Oh, $15.00." Dr. B. rejoined: "That seems pretty steep, as I can not send them a bill for more than $20.00 for both our services and I had to catheterize her for three days after delivery." Dr. T. replied: "Then, make it $10.00." The patient's family was in comfortable circumstances.

COMPARISON OF CHARGES IN VARIOUS PARTS OF THE COUNTRY.

Several weeks ago, desiring to ascertain how the fees charged in this section of the country compared with those elsewhere, I wrote a number of letters to physicians in small towns in various parts of the country and received answers from North Carolina, Texas, Wisconsin, Arkansas, North Dakota, California and Utah. In all except two, Wisconsin and North Carolina, town visits were charged at $2.00 or above (California $2.50); office consultations, $1.00 or above (California $1.50). Three physicians reported visits in the country at $1.00 mileage one way, without extra charge for visit, one the same with $2.00 extra for visit, and three 50 cents mileage and $1.00 extra for visit. Consultation fees were $10.00 in four reports, $5.00 to $10.00 in one and $5.00 in two. Obstetric attendance was reported at

$25.00 in one (California), $25.00 in town and $30.00 out, in one (Utah), $15.00 in one (North Dakota), $10.00 and mileage in one (Wisconsin), and $10.00 in three. Forceps delivery additional charged in one $25.00 (Texas), $10.00 to $25.00 in one (Utah), $10.00 to $15.00 in one (California), $15.00 in one (North Dakota) and $5.00 in three. For night visits three physicians reported double day charges, two one-half more and two no extra charge. While there is no complete uniformity in the answers to my queries, it is very evident that in all save two (Wisconsin and North Dakota) the fees charged for like services are much higher than they are here, and yet it must be assumed that Iowa and Nebraska are as prosperous to-day as any section of the country.

INCREASED FEES OF ADVANTAGE TO PATIENTS AS WELL AS TO PHYSICIANS.

Looking over the subject of physicians' fees in the past twenty-five years, one is impressed with the fact that the charges made by men in country practice have not advanced one cent, whereas the classes of people whom he serves have doubled, trebled and even quadrupled their incomes. Twenty-five years ago the outlay for the physician's medical education in time required and money expended was less than one-half the present cost and in consequence thereof the value of service which he gives to-day as compared with the former period can not even be measured in dollars and cents. The charge of 50 cents for an office prescription may be all the prescription is worth many times, for, if it is the prescription which the fee is made for, the patient is not getting more than his money's worth. Too often is this impression given to patients or too seldom is he led to understand that the prescription is only an end result of an examination which requires technical knowledge and experienced judgment. A 50-cent fee is too apt to mean a 50-cent service. This is no reflection on the doctor whatever, for human nature is the same everywhere, and so long as it is the custom for our services to be measured in money value the reverse in most instances will apply, the value in money determines the service. To state an opposite hypothesis may make this statement seem less critical. Suppose the fee charged for office consultation were arbitrarily fixed at $5.00, is there a single physician in this state who would be content simply to ask a few questions, look at the tongue, determine the absence of fever, by the hand contact, turn around and write a prescription? What applies to a 50-cent office fee applies also to a dollar visit in town, a mileage of 50 cents without visit fee in the country and a twenty-four to forty-eight hour obstetric fee of $10.00. The low-fee proposition has two principal bad results for the physician. By the undervaluation of his own service, his confidence in himself in time suffers, his work becomes superficial and he ceases to develop, and, failing to earn a competency during the active years of his professional life, he too frequently goes into his old age without the necessities of life or is dependent on relatives for support. On the other hand, fees proportionate to good service mean much to the doctor. The stimulus to be thorough and painstaking, to think and to study over his cases, to relieve him of the necessity of outside financial interests, means much for his professional advancement, for the increased revenue and his inclination lead him to seek the change and advantages offered by the postgraduate schools and by the hospitals of nearby cities. He also feels better able to afford the time and pleasure of the county, state and national societies more frequently.

There is no community which would not be greatly benefited by an increased income to all the members of the profession in their midst. Suppose, for example, that each physician in a town having six physicians should devote from three to six months every six years to postgraduate hospital work, what effect would this have on the value of his service and who else would profit by it? Does a physician ever go to a county, state or other medical society meeting without receiving some new suggestion or having awakened some new thought? If he goes to Chicago, New York, Philadelphia or Baltimore for a month in contact with other medical men, does he not return with renewed determination to get out of a rut and to stay out? If he can figure that his professional income will admit of his doing this, and that by so doing he will gain vantage ground, and by the very move still further increase his income, is he not standing in his own light not to do it? Farther than this, does not his duty to his patrons and his influence in the community require him to do it? And if so, should they not pay for it in fees which will permit of a little more than a comfortable living? When I have talked with some of my professional friends about this subject, the reply has been "The fees in our community have been fixed so long that our patrons would rebel at any increase, and, furthermore, there would be lack of uniformity in competing towns and we might sacrifice our business." To the first suggestion I would offer a protest. From what I have written above as to the character of the service, it is assumed that the farmer or the tradesman is willing to pay for what he buys. If he is made to see that what he buys is worth the money, he pays. That he is not averse to doing so can be demonstrated time and time again, when he is seen to pay railroad fare in addition to a good-sized consultation fee to some city doctor, who may be no better or perhaps not so good as his own physician.

The increase and prestige of men aiming somewhat at specialization in small towns is an indication that good fees may be asked and collected without hesitation. Recently I saw a patient with her physician four miles from a town of 400 in the central part of the state. In eliciting the history, it was ascertained that six months ago the previous physician's first introduction to the family had resulted in a diagnosis of a large ovarian tumor. He advised her removal to a city hospital for an operation. Following part of his advice, she went to the next town, where the tumor was removed by a local surgeon who charged and collected $300.00 and $20.00 a week for a room and nursing. Let any one tell me that farmers will not pay the price, when this same work could have been done in Omaha for $50.00 and in Lincoln for probably $75.00.

ORGANIZATION AND A FEE SCHEDULE.

The frequency with which farmers and people from small towns go to nearby cities for minor medical and surgical consultation, ignoring often the local physicians, is, to my mind, the surest indication that they want to pay more, for, as a disinterested spectator, I have often seen them go to men inferior in every way, except in the fee. A young physician recently located in a fine Nebraska town complained to me that the outlook was poor, for nearly all the best people there went to the city, twenty miles away, for their medical advice.

I advised him of his great opportunity, for if he had the incentive to charge enough and an aim to earn his fee, with his qualifications, which I well knew, he could turn the tide in his own favor.

Would any reasonable man object to paying the doctor more for night than day work if asked? He has to pay the carpenter, the painter, the plumber who do overtime work at an increased rate, and why should he kick on the doctor? I have been surprised at the number of men who informed me that they did not discriminate between the fees for day and night work. A busy man at this rate burns the candle at both ends and quits at an earlier age without much to show for it. When one considers the number of unnecessary calls to which the physician is subject during his sleeping hours, he must feel that, with no difference in cost to the patron, it is a matter of slight concern whether he waits till night. An increase in the fee for this work would anticipate or postpone a sufficient number of calls to save the doctor much valuable time for his natural rest and keep him busier in the daytime. For the absolutely necessary work it would be a small man who would refuse double fee.

The question of custom and competition is advanced as a theory for low fees. How easy this can be corrected is exemplified by the statement of a physician from the southern part of the state to me only a few days ago. The subject of a fee schedule came up for discussion at a meeting of his county society, and an advance all along the line was agreed on. There were six towns in the county and between them a splendid large farming community. The new schedule was published in every newspaper in this county, duly signed by the members. He said there was some kicking for a while, but the new rates were soon accepted and had been in full force for some time. Organization, then, must be the solution of the question. The county and district societies should do as much for the doctor in this regard as they do in every other, and I am not so sure that a move in this direction by the state society for a minimum schedule which would be adopted by all its component parts would be in the right direction. It would do away with variations in schedules applicable to border towns and would be much more easily lived up to. I believe the competition element so far as fees are concerned in the selection of a physician is much overestimated. In time of drouth and depression, with poor crops and burdened farms, it might prevail, but certainly the drift at the present time of progress and prosperity is toward getting results, even if it does cost. Granting that nonmembers of societies or a few backsliders would keep up the old custom, this should not deter those who believe that a workman is worthy of his hire and by this very assumption attract those who believe with them. It was said of an old physician of my acquaintance that he had a large following, not because he knew more than any of his colleagues, for he really knew less than many of them, but because he charged large fees. If this kind of a bluff works, how much more effectual it must be if it is backed up by sincere effort, painstaking care, and a disposition to be worth the price.

My aim in bringing this subject up in this form is to unload a growing impression on my mind that the doctor in country practice in Nebraska is underpaid and that he himself is mostly to blame for it, that his schedule of fees has not advanced with the requirements of his education, of his needs and of his position, and that by means of a well-directed effort, individually and collectively, there is no reason why results should not be accomplished which would not only be to his advantage, but would react favorably on his constituency.

FURTHER OBSERVATIONS ON ROCKY MOUNTAIN SPOTTED FEVER AND DERMACENTOR OCCIDENTALIS.*

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In view of the brief season during which Rocky Mountain spotted fever prevails, uninterrupted study of the disease is conditioned on the maintenance of the infection in experiment animals.

In a previous communication[1] my inability to preserve the disease by inoculation from guinea-pig to guinea-pig was referred to, and the hope was expressed that alternation of the infection between the monkey and the guinea-pig might result in the preservation of the virus.

This experiment has been entirely successful and Table 1 illustrates the life history of the virus since it was obtained from the patient, Bradley.

TABLE 1.

Number of animal.	Date.	Source, and Material Inoculated.
Monkey I	June 11	Patient, Bradley; defibrinated blood.
Monkey II	June 20	Monkey I; defibrinated blood.
Guinea-pig 12...	June 27	Monkey II; fresh heart's blood.
Monkey IV	July 7	Guinea-pig 16; blood and organs.
Guinea-pig 16...	July 14	Monkey IV; defibrinated blood.
Monkey V	July 22	Guinea-pig 16; blood and organs.
Guinea-pig 17 ...	July 28	Monkey V; defibrinated blood.
Monkey VI ...	August 3	Guinea-pig 17; blood and spleen.
Guinea-pig 25..	August 16	Monkey VI; blood and serum.
Monkey VIII..	August 23	Guinea-pig 25; blood and organs.
Guinea-pig 36..	August 30	Monkey VIII; spleen.
Monkey IX..	September 6	Guinea-pig 36; blood and organs.

All infected animals have run identical courses of fever, which are typical in this respect, that an incubation period of from two to four days intervenes between the time of inoculation and the onset of the regular febrile course. Commonly a moderate rise in temperature follows immediately on the inoculation and persists for one or two days, then falls near to normal for one or two days more, when the customary course sets in. This initial or primary fever probably is caused by intoxication from the large amount of material which is frequently injected. When a smaller amount of blood or emulsion of tissue is used this initial fever has not appeared.

Several facts are relied on in concluding that the disease transferred by these inoculations is spotted fever rather than some other infection which may have crept in during repeated passage. In harmony with the experience which was met in making cultures from man, no growth is obtained from the blood of infected animals, provided the cultures are made at a time when agonal or postmortem invasion by common bacteria has not taken place. If plates are inoculated with the heart's blood at the instant of death, it is customary to obtain no visible growth on ordinary media, yet this same blood proves infectious for other animals. Again, the rather frequent development of a

* This work has been done under a grant made by the American Medical Association through the Committee on Scientific Research, and with the aid of Missoula and Ravalli counties, Montana, and of the Montana State Board of Health.

* From the Pathological Laboratory of the University of Chicago.

1. The Study of Rocky Mountain Spotted Fever (Tick Fever?) by Means of Animal Inoculations, THE JOURNAL A. M. A., July 7, 1906.

hemorrhagic eruption in the monkey or guinea-pig, a manifestation which is identical in appearance, if not in distribution, with that seen in man, speaks for spotted fever rather than some other infection. This eruption is much more constant in the monkey than in the guinea-pig. In both animals it begins on the scrotum and foreskin. In the guinea-pig it may be found on no other part of the body, although it can be seen as a more or less generalized eruption occasionally. The external genitals of the female guinea-pig commonly become swollen and congested; recently, however, extensive hemorrhages have occurred in the skin of the labia in a number of females. But one female monkey has been used, and in her no cutaneous hemorrhages were discovered. It will be readily understood that the detection of a pink roseolar eruption in either the monkey or the guinea-pig is difficult. In the guinea-pig it can be recognized with certainty only in white-skinned animals. In both animals the hemorrhagic eruption, when it appears, is a late manifestation and it would seem to be related in some way to the virulence and duration of the infection. The disease may be so virulent that the animal dies before the eruption would appear, or so mild that it does not occur. The appearance of the hemorrhages does not necessarily presage a fatal issue; two monkeys and several guinea-pigs which had extensive hemorrhages into the skin have recovered.

A third fact which stamps this experimental disease as spotted fever consists of the identity of the course of fever with that produced in the animals by direct inoculation with human blood.

The essential anatomic changes, enlarged spleen and lymph glands, congested kidneys, etc., are identical with those seen in the animals first inoculated, and correspond with the changes found in man.

There seems to be no particular difficulty involved in perpetuating the infection, except in the matter of expense. Duplicate inoculations should be made and the blood or organs used for inoculation may be taken at any time after the fever has reached its high point. To await the death of the animal before making the transfer is to risk the loss of the culture; the animal may recover.

THE DISTRIBUTION OF THE VIRUS IN THE BODY OF THE INFECTED ANIMAL.

In my first experiments the infectiousness of the blood, in spotted fever, was demonstrated. It would naturally by inferred that the various organs are infectious at least to the degree in which they contain blood. On this account one would reasonably expect the spleen to be infectious and this has proven true in a number of inoculations. The testicles have been used for inoculation a number of times. It was thought that the testicles might be a point of predilection for the virus, in view of the severe hemorrhages which often occur in close proximity to them, i. e., in the scrotum. They were shown to be infectious in several instances, yet their virulence was not so great as to indicate any special concentration of the virus at this point. The scrotal hemorrhages may have no relation to the amount of infection of the testicles.

The distribution of the virus among the organs of an infected monkey (VIII) was recently determined. The animal was exsanguinated from the carotid to deprive the organs of as much blood as possible. Each organ was then ground with sterile sand and suspended in physiologic salt solution. Identical weights of the different organs were not used, but approximately the same mass was employed in each case. A further attempt at uniformity was made by rendering the different emulsions of approximately the same density. Five cubic centimeters of each emulsion were injected intraperitoneally into guinea-pigs, which varied in weight from 350 to 550 grams. Table 2 shows the results.

TABLE 2.—THE INFECTIOUSNESS OF DIFFERENT ORGANS.

Number.	Material inoculated.	Result.
35	Mesenteric, inguinal and axillary lymph glands.	Death in 18 days.
36	Spleen.	Death in 7 days.
37	Bone marrow.	Death in 6 days.
38	Testicles.	Death in 15 days.
39	Liver.	Death in 8 days.
40	Kidney.	Death in 7½ days.
41	Medulla oblongata.	Recovered.
42	Cerebral cortex and adjacent white matter.	Death in 12½ days.

In the fatal cases cultures of the heart's blood were sterile except in the case of guinea-pig 37, in which a few colonies of a staphylococcus developed. The technical difficulties in preparing the bone marrow increased the opportunities for infection. It is thought very probable, however, that the animal died of spotted fever because of the duration of the course.

Those organs seemed to be the most infectious which contained, naturally, the most blood, i. e., the liver, spleen, and bone marrow (?). In these organs exsanguination still leaves rather large quantities of blood. The kidney, however, was fully as infectious as the organs which were much richer in blood. It is possible that the kidney becomes the repository of a larger mass of micro-organisms, by virtue of its excretory function. It is realized that this experiment does not give an exact measurement of the degree of infection of the different organs, and that the results, at the best, can be considered no more than approximate.

In another experiment an attempt was made to determine the minimum fatal dose of the blood of the infected monkey, the blood being taken six days after inoculation. The injections were intraperitoneal (Table 3).

TABLE 3.—VIRULENCE OF THE BLOOD OF THE INFECTED MONKEY.

Guinea-pig.	C.c. of Blood.	Result.
30	0.5	Death in 14 days.
33	1.0	Death in 7½ days.
31	1.5	Death in 7½ days.
32	2.0	Death in 13½ days.
34	3.0	Death in 6½ days.

Plate cultures of the heart's blood were sterile in all cases. In this experiment the minimum fatal dose of the blood of the infected monkey on the sixth day of the disease was in the vicinity of 0.5 c.c. Guinea-pig 30, which received this dose, died on the fourteenth day, whereas animals which live so long ordinarily recover. Guinea-pig 32, which received 2.0 c.c., showed unusual resistance. The guinea-pigs weighed about 350 grams each. Other experiments indicate that subcutaneous and intravascular inoculations have a similar degree of virulence.

ACTIVE IMMUNITY.

I have not learned of an authentic example of a second attack of spotted fever in man, hence it has seemed somewhat probable that one attack renders the body immune. This has been found to be true in a recent experiment on the monkey.

On June 20, 1906, Monkey II was inoculated with the blood of Monkey I, the latter having just died as the result of inoculation with the blood of the patient, Bradley. Monkey II ran a typical course of fever, showed a macular eruption of the perineal skin on the eighth day, and extensive hemorrhages of the scrotum.

perineum, back and extremities on the eleventh day. The temperature returned to normal on the twelfth or thirteenth day, hence the eruption became hemorrhagic as convalescence was about to begin. The animal regained its former health and activity.

Recently this animal was again inoculated with the blood and tissues of an infected guinea-pig (No. 36). The total mass of fluid injected was 8 c.c. With the exception of some indisposition on the following day, the injection produced no apparent effect. For a few days the temperature was slightly higher than before, but during this time and since the monkey has shown no indisposition and has been as active as before inoculation.

By way of control another monkey of the same size (No. IX) was inoculated with the same amount of material, the same quantity and by the same route. Between the third and fourth days the temperature began to rise, and until it was killed (7 days), it ranged between 105.1 and 106.3. The conjunctivæ became reddened, the animal shivered at frequent intervals and sat, inattentive and with head drooping, continuously. On the fifth day the supraorbital skin showed reddened patches, and on the sixth day a roseolar eruption was visible on the scrotum. The blood and tissues were used for further experiments.

From this experiment it is evident that one attack in the monkey confers an active immunity, and on the basis of reasonable analogies one may conclude that man probably acquires a similar immunity.

A similar acquired immunity has also been demonstrated in the guinea-pig. Its duration, beyond the period of two months for the monkey and three months for the guinea-pig, has not been determined.

THE LIFE HISTORY OF DERMACENTOR OCCIDENTALIS.

On account of the suspicion which attaches to *Dermacentor occidentalis* as the carrier, or a carrier of Rocky Mountain spotted fever, its life history is important. The following brief notes concerning this question are given by way of recording the changes which were observed under artificial conditions. No description of minute morphologic changes will be given at this time.

May 20, 1906, a fully developed female was placed in a cotton-stoppered test-tube.

June 21 (about), the tick began laying eggs, of which several hundred (estimated) were eventually deposited.

June 28 or 29 hatching began and continued for a week or ten days, resulting in six-legged larvæ of minute size.

July 13, the tube with its contents was placed in a tick-proof cage with a guinea-pig. The larvæ took hold readily for the most part, but did not feed continuously. They increased slightly in size. Eventually all remained attached to the skin for several successive days, grew to a length of 1 to 1¼ millimeters, and became swollen and of a uniform dark slate color. On August they began to drop from the guinea-pig, moved to a safe place, and went into a quiescent state, appearing as if dead.

August 5 they began to molt, throwing off a snow-white pellicle, and came out as eight-legged nymphs. After 7 to 10 days the molting of the brood was almost complete. When they first appeared they approximated the size of the well developed larvæ.

When again placed with a guinea-pig or monkey they seemed to feed intermittently for a time, but eventually attached themselves firmly and underwent a great increase in size, some reaching a length of about 3/16 of an inch. With the increase in size the color again changed to that of a uniform gray-brown or slate color. It required from 6 to 10 days for this development to take place after the ticks were placed with an animal. On August 30, practically all the ticks which remained alive had undergone this change.

As they reached the condition mentioned they were removed and placed in ventilated boxes where they went almost immediately into a second quiescent stage. In about 10 days molting again began, a white mantle being thrown off, and the mites emerged as adult ticks, with the marking which one finds under natural conditions in the early months in Montana.

The experiment was carried on entirely at room temperature, and the various stages may not correspond in point of time with those taking place under natural conditions.

Under natural conditions, in the Bitter Root Valley, the adult ticks begin to disappear during the latter part of June. This probably means that the males, and those females which have not found a host, die, whereas the fully developed females deposit their eggs. Locally, knowledge of the further history of the tick was limited, or nil. It is certain, however, that during the warm summer days, the conditions are favorable for the hatching of the eggs, and for the development of the larvæ, provided a host is reached. Inasmuch as a crop of adult ticks is not observed in the fall, it is possible that the second molting stage, mentioned above, represents the hibernating stage of the mite. It is well known, locally, that the first few warm days of the spring bring out the ticks. These few warm days apparently would be sufficient to bring to completion the second molting stage. On the other hand, it must be admitted as possible that the second molting stage is completed in the late fall, and that hibernation begins at once with the animal fully developed, the first few warm days of spring being sufficient to arouse him.

Observations of a more complete nature will be made at a future date.

OSTEOPLASTIC RESECTION OF THE COSTAL ARCH IN ORDER TO REACH THE VAULT OF THE DIAPHRAGM.*

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Of all the regions within the abdomen the vault of the diaphragm is the most difficult of access, principally owing to the unyielding character of the lower portion of the thorax.

Various methods have been devised to overcome the difficulty. In cases of subphrenic and intrahepatic abscess or cysts of the convexity of the liver, one or more ribs have been resected, the pleural sac traversed or pushed up and drainage in a straight direction arranged for.

For the same purpose Lannelongue did resection of the eighth to the eleventh costal cartilages or of the respective ribs—a rather extensive additional operation.

Micheli[1] worked out on the cadaver an operation

* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. Tenth Italian Congress of Surgeons, 1895.

similar to Schede's thoracoplasty. Of course, he avoids injury to the pleura and includes in the flap, diaphragm and parietal peritoneum. It seems that the operation was never done on the living subject.

While attempting to excise a carcinoma of the cardia and lowest portion of the esophagus, von Mikulicz once tried a plan very much like the one just described.[2] In a second case he made a median incision above the

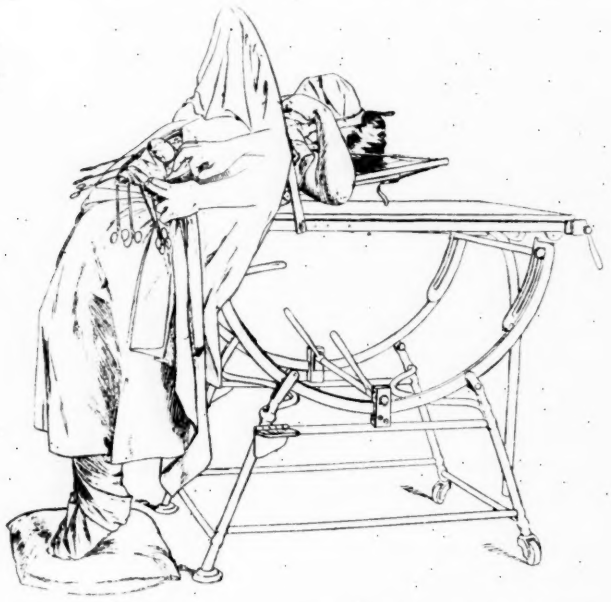

Fig. 1.—Kelling's position for the upper part of the abdomen.

umbilicus, an additional transverse one at right angles with it and three further incisions, exposing the seventh, eighth and ninth ribs near their costo-cartilaginous junction, where the cartilages were divided. Then the flap plus costal arch could be pulled to the left and the cardia reached. In both instances the patient succumbed to the effects of the serious operation on the stomach.

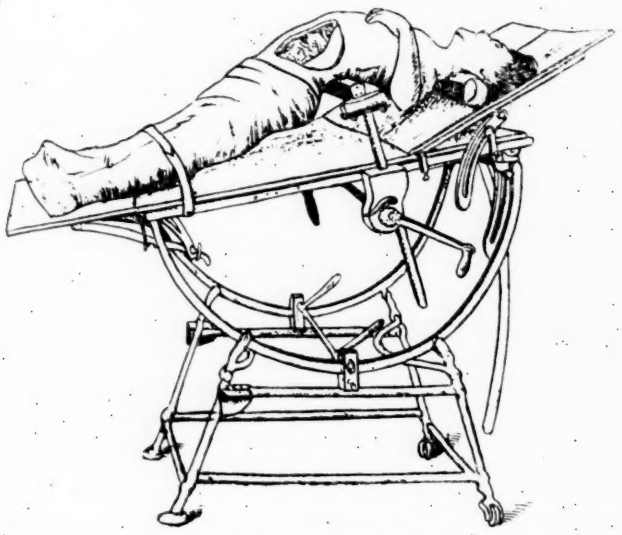

Fig. 2.—Kelling's later modification of the posture shown in Fig. 1.

In 1901 G. Kelling[3] recommended the posture which is best explained by Figure 1 taken from his article. It shows a Trendelenburg posture, as it were, for the upper part of the abdomen, "Beckenhängelage" in contradistinction to Trendelenburg's "Beckenhochlagerung." The posture seems cumbersome and makes the maintenance of perfect asepsis difficult. Later, Kelling[4] suggested in its place the posture shown by Figure 2.

Fig. 3.—Osteoplastic resection of the costal arch in the presence of a gastric fistula by means of a U-shaped incision for an impermeable cicatricial stricture of the esophagus.

Fig. 4.—View of patient, four weeks after splenectomy for sarcoma.

I doubt that this posture will make it possible to operate conveniently near the top of the diaphragm in difficult cases.

2. G. Gottstein: Technik u klinik der Oesophagoskopie, Mitteilungen aus den Grenzgebieten, vol. viii.

3. Centbl. f. Chir., 1901, No. 42, p. 1025.

4. Centbl. f. Chir., 1904, No. 4, p. 89.

Two years later, G. Marwedel,[5] unaware of von Mikulicz's previous attempts in a similar direction, described a simplified operation, an osteoplastic resection of the lower anterior portion of the thorax which he had thoroughly worked out on the cadaver and once successfully carried out in the living. The operation is less complicated than von Mikulicz's procedure. Asthoewer,[6] a few months later, stated that he also had done two somewhat similar operations several years before Marwedel.

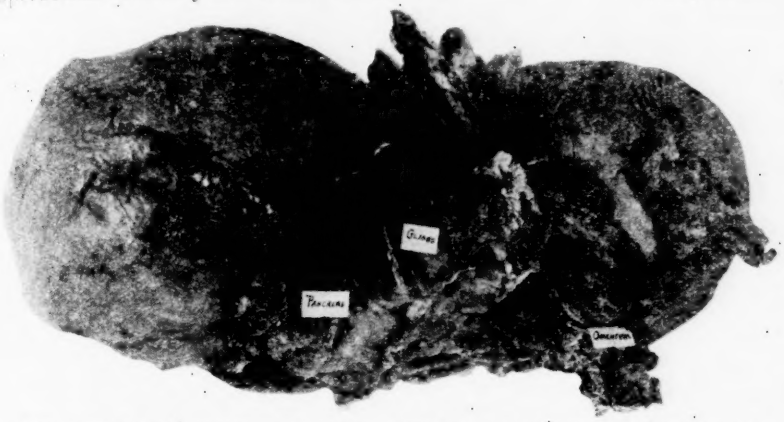

Fig. 5.—Multiple sarcoma of spleen, secondary to retroperitoneal sarcomatous glands, the spleen being the only intraperitoneal organ showing metastatic growths. The distal half of the pancreas is attached to the tumor.

Within the last two years I have had occasion twice to employ osteoplastic resection of the costal arch. It enabled me conveniently to do the work required, which otherwise would have been impossible. The various steps and important points of the operation can be brought out best, I think, by briefly relating the histories of the two cases:

CASE 1.—This case has already been fully described.[7]

Summary of History.—A boy, 14 years of age, had an absolutely impermeable cicatricial stricture of the esophagus (caustic lye). For eight years he had been fed entirely through a gastric fistula. All attempts to enter the stomach from above as well as under direct inspection with the urethral speculum introduced through an esophageal lip fistula in the neck having failed, an osteoplastic flap was raised by a U-shaped incision, the water-tight gastric fistula being carefully preserved (Fig. 3). A part of the anterior wall of the

Fig. 6.—Same specimen divided longitudinally.

stomach, well above the fistula, was thus reached, horizontally incised and the passage upward searched for from below.

To my great disappointment this attempt, too, proved unsuccessful. The esophagus was evidently entirely obliterated for some distance. The stomach incision was, therefore, closed again by means of a double row of Lembert silk sutures; the osteoplastic flap was fitted back in its place and the skin sutured; there was no drainage. The boy made a good recovery. I saw him a few weeks ago. He still nourishes himself through the tube (in all now for ten years) and has gained in weight.

Two ways are still open to help this patient: 1. To raise again the osteoplastic flap, this time opening the stomach by a perpendicular incision just below the cardia, which, as I had seen at the time of the first operation, could be entirely brought into view and pulled down from the foramen esophageum for fully an inch and a half; or, better, 2. To attempt esophagogastrostomy in Sauerbruch's chamber under negative pressure,[8] or in Brauer's new apparatus with the bronchial tree placed under increased pressure.[9] For the present the boy's mother is opposed to further operation.

CASE 2.—Patient, a male, 29 years of age, came under my care in December, 1905.

He had entered the medical division of the German Hospital on account of a rapidly enlarging spleen and great weakness. The spleen was found to reach the umbilicus; its surface was nodular; there was some fluid in the abdomen. Diagnosis of malignant tumor (sarcoma) of the spleen was made and the patient transferred to the surgical division.

Operation.—On opening the abdomen, December 18, a large amount of sero-sanguinolent fluid escaped; the adherent omentum having been loosened and lifted out of the abdomen, the nodular spleen came into view. It was attached to many of the neighboring organs and particularly tightly fastened in the vault of the diaphragm; there was no metastatic growths in the liver or elsewhere. Radical operation was clearly indicated, chiefly in view of the patient's youth. Splenectomy was decided on. A transverse incision to the tip of the eleventh rib was added (Fig. 4). While this rendered access somewhat easier, it was still impossible to reach the upper pole of the spleen, although the lumbar spine had been well raised and the legs considerably lowered, while one assistant pulled the costal arch to the left with two hands, the other making traction on the enlarged spleen downward as far as possible.

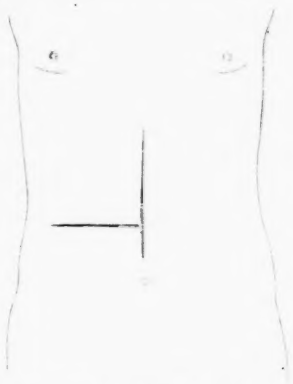

Fig. 7.—Right-angled incision.

It was evident that I should either have to give up or try some other way. The only chance of success seemed to lie in getting the costal arch out of the way. I therefore entered the space between the lower surface of the belly of the left rectus muscle and the peritoneum with posterior sheath of the rectus muscle, to which, further outward, the transversalis muscle is attached. From here I bluntly made my way upward to the border of the costal cartilages, which were quickly brought into view (Fig. 13).

This part of the work is very simple, for the reason that the rectus and external oblique muscles have their origin further up on the thorax and are attached to the latter in the portion concerned by very loose connective tissue only.

Then the seventh cartilage, representing the union of three,

5. Centbl. f. Chir., 1903, p. 938.
6. Centbl. f. Chir., 1903, No. 46, p. 1257.
7. Med. News, Oct. 29, 1904.
8. Mittellungen aus den Grenzgebieten, vol. xiii, p. 3; and Meyer, Willy: Annals of Surgery, May, 1905.
9. Deuts. med. Wochft., Sept. 21, 1905, and April 5, 1906.

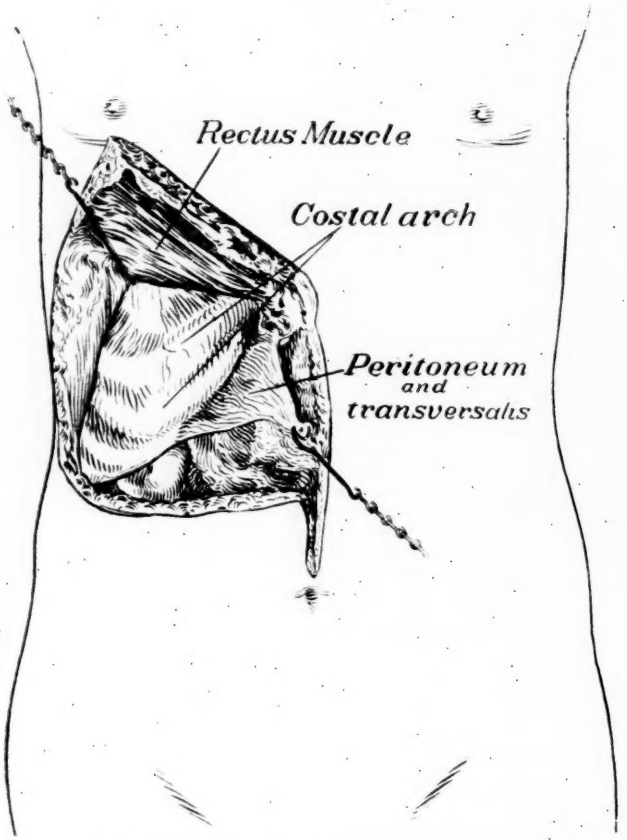

Fig. 8.—Right-angled incision. Skin-muscle-flap turned back, peritoneum and transversalis muscle remaining attached to costal arch, the latter exposed.

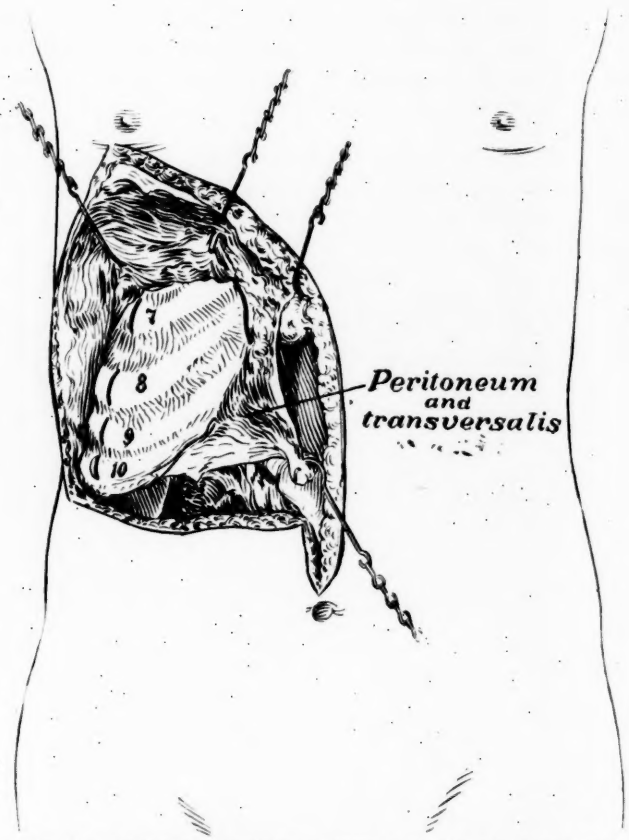

Fig. 9.—Right-angled incision. Seventh, eighth, ninth and tenth cartilages divided close to their juncture with the ribs; seventh cartilage, next to the sternum, also divided.

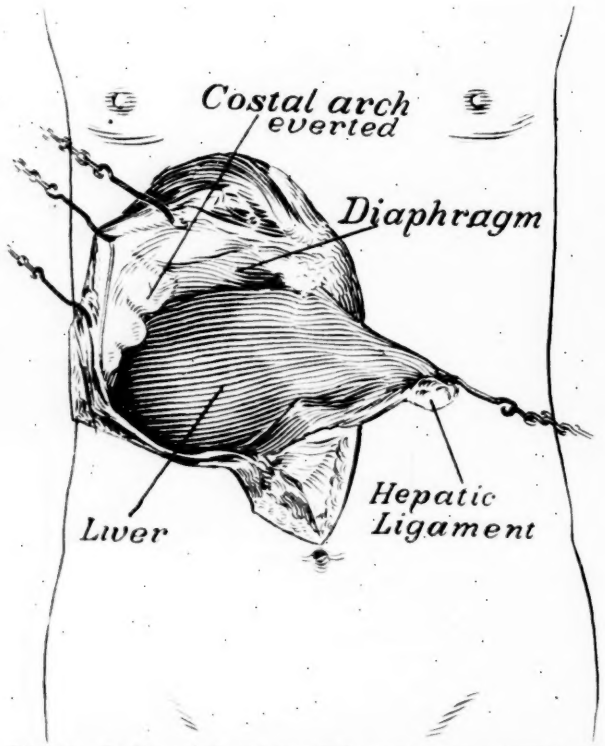

Fig. 10.—Right-angled incision. Skin-muscle flap returned to its place; entire costal arch then raised, exposing surface of liver; hepatic ligament pulled toward median line.

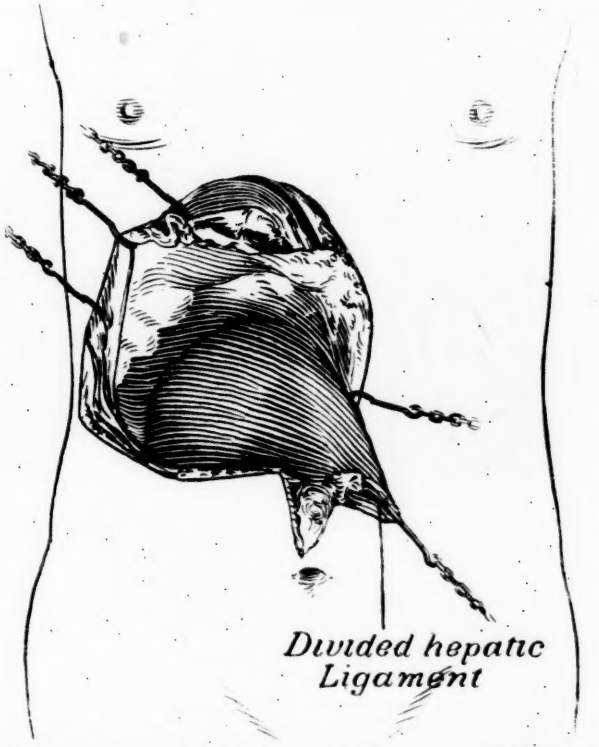

Fig. 11.—Right-angled incision. Hepatic ligament divided up to its diaphragmatic attachment; strong traction used on same, affording better view of liver.

was divided with the knife close to its sternal attachment, care being taken not to allow the knife to slip; and the seventh, eighth, ninth and tenth cartilages likewise, just in front of their union with the ribs (Fig. 14). Now the skin-muscle-bone flap is replaced in its normal position; two sharp retractors are hooked into the peritoneum and the costal arch is raised,[10] while the second assistant takes hold of the spleen, pulling it gently but firmly downward and inward.

It truly was fascinating to observe how readily the upper pole of the spleen with the ligamentum phrenico-lienale came into view and how the latter—in this case a short, broad, thick band—could be ligated in sections and then divided between two ligatures. The most delicate work in splenectomy, the division of the diaphragmatic attachment, could thus be carried out neatly and safely and in full view of the operator. Thereupon the spleen could be turned around its transverse axis, the upper pole made to emerge from the abdominal cavity and the whole organ gently pulled up by the first assistant, its pedicle thus being well stretched. It proved to be firmly adherent to the tail of the pancreas. From the latter a mass continued upward with the vena cava. I had to push off the latter, place a double chromicized catgut ligature around the body of the pancreas, divide it between the ligatures with Paquelin's cautery and tie off the greater portion of the adherent omentum. At the splenic hilus only the large vein

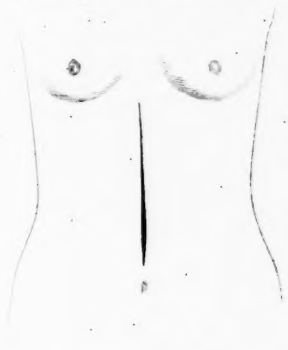

Fig. 12.—Straight, median incision.

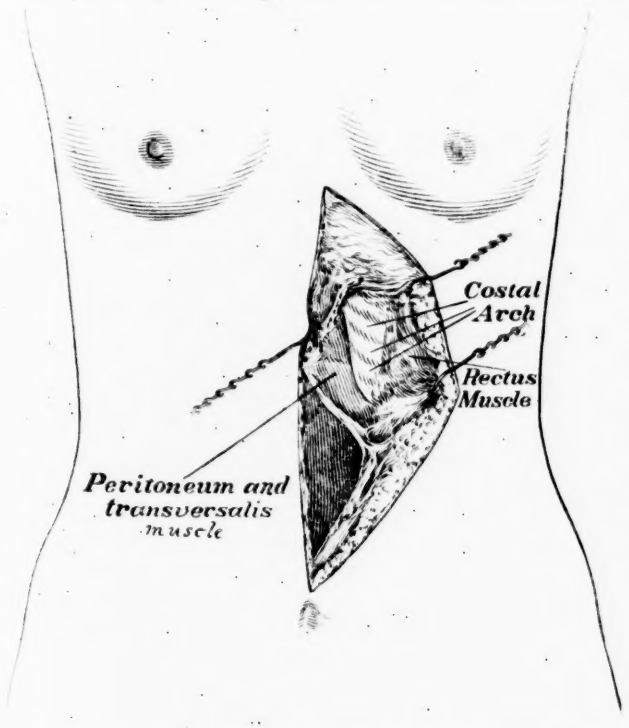

Fig. 13.—Straight median incision. Rectus muscle pulled outward and upward, peritoneum and transversalis muscle inward; costal arch exposed.

came into view. It, too, was divided between two ligatures, thus completing the operation, which had been done throughout in an absolutely bloodless manner. (Figure 5 nicely reproduces the interesting specimen.) Thereon a Mikulicz's tampon was placed in the diaphragmatic vault, the osteoplastic flap returned and pressed in position and the T-shaped abdominal wound carefully sutured. The abdomen was well strapped with zinc adhesive plaster and a snugly fitting binder tied around it. After two stormy days, when intravenous and subcutaneous saline infusions had to be freely used, the patient made a satisfactory recovery. He was up and about at the end of the fourth week (Fig. 14).

The spleen, twelve inches long and seven inches wide, weighing five pounds, when divided showed the typical picture of a secondary (metastatic) multiple tumor (Fig. 16), which, on microscopic examination, proved to be a small round-celled sarcoma.

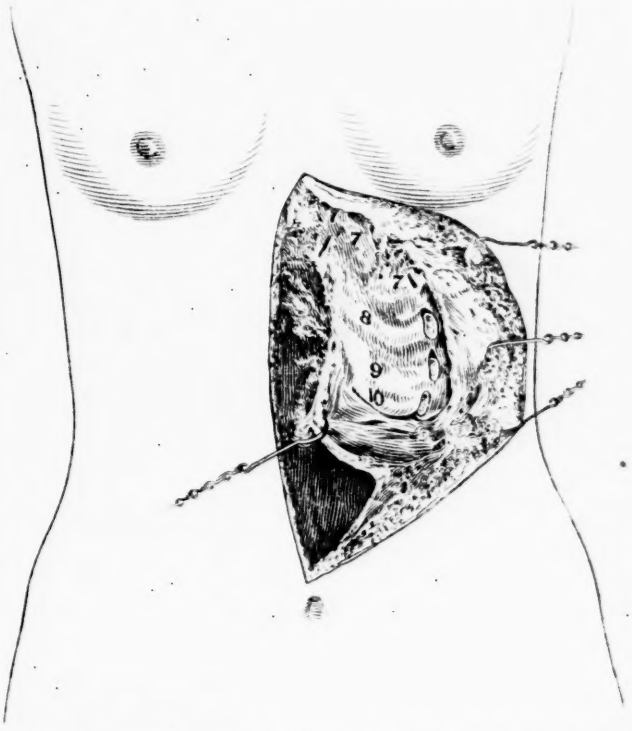

Fig. 14.—Straight median incision. Cartilages divided. In this specimen the cartilage of the eighth rib is not united with that of the seventh near sternum.

Of course, with such a microscopic diagnosis there was no hope of the patient's permanent recovery. We tried the *x*-rays, but without avail. He died suddenly, Feb. 26, 1906, ten weeks after operation, as a result of internal metastases. Autopsy showed the costal cartilages to have healed in place without any deformity and with good ligamentous union.

I believe that the primary tumor in this case had developed in the retroperitoneal glands which gradually approached the hilus of the spleen, the growth then perforating into the splenic artery and producing the multiple metastases found. This, at least, is the way I would venture to explain this peculiar dissemination of the disease in only one of the large intra-abdominal organs, and I do so on the basis of an observation I made a few years ago in a patient afflicted with carcinoma of the posterior wall of the stomach. Here the tumor had crept along on the outside of the gastric wall toward the right until it reached the portal vein, which it perforated. Then the blood current continuously took along and carried into the liver carcinomatous particles which produced intrahepatic (localized) metastases in an amazingly short time. The first embolic attack was marked by a chill and acute abdominal symptoms, simulating an abscess of the liver. Exploratory incision and postmortem, seven weeks later, explained this rare pathologic picture.

10. Often the assistant's hands will be found more useful than retractors, as will also be seen in this case later on.

Both cases related above proved the great help we may expect from this osteoplastic raising of the lower part of the thorax, when it becomes necessary to reach ordinarily inaccessible organs within the phrenic convexity. It is natural that in cases of need the ribs may be divided in place of their cartilages, further outward, including also the sixth and fifth ribs. It further is evident that the flap may be shaped according to indica-

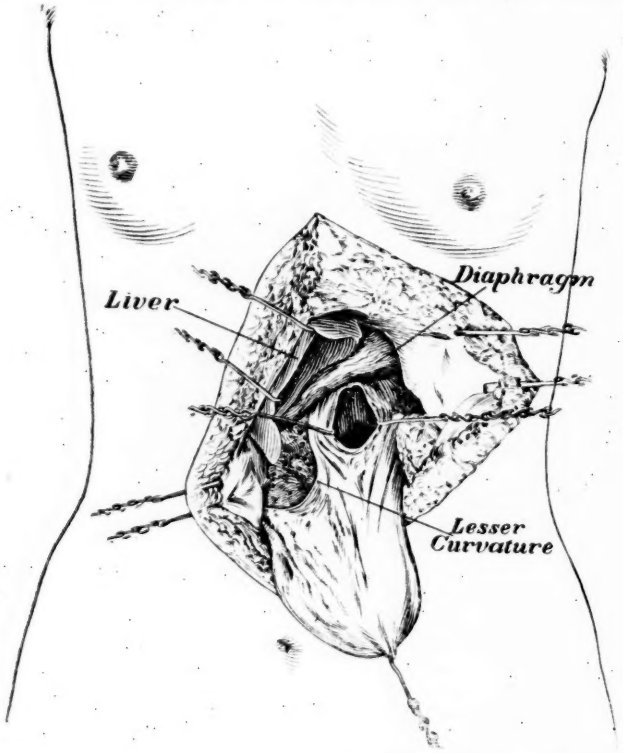

Fig. 15.—Straight median incision. Lumbar region of cadaver raised; skin-muscle-bone flap pulled upward and outward, exposing a large area of the stomach; the cardia incised and cut edges held apart by hooks.

tion as in Case 1 (Fig. 3). On the right side the surface of the liver can be better reached by pulling on the suspensory ligament (Fig. 10) or by dividing the latter up to its attachment to the diaphragm and then using it for strong downward traction (Fig. 11).

Through the courtesy of Drs. John Rogers and Irving S. Haynes, of Cornell University, I have been able to make some dissections on the cadaver in order to test this operation in combination with the various abdominal incisions that come into consideration: median, oblique and ⊢. The illustrations, representing pen-and-ink drawings made from photographs of the dissections (through the laboratory of Dr. Fred E. Sondern), speak for themselves (Figs. 7 to 17).

From my experiments on the cadaver I have concluded that the usual median (or rectus) incision can well be combined with osteoplastic resection of the costal arch; but, of course, the space gained in connection with this incision is not as satisfactory as when the oblique or ⊢ incision is used. It seems to me that in cases of resection of the stomach, in which the cardiac portion and lesser curvature can not well be pulled downward, but exposure of same is imperative, the additional room gained by dividing the cartilages will make radical work practicable. On the other hand, operations on the spleen or liver, if started by means of a median incision, will require an additional transverse incision. If a careful plan can be laid out beforehand, and it is feasible to employ the oblique incision, this will be found to afford excellent access, after lifting the lower part of the thorax. The resulting wound is not so convenient for closure. Through-and-through sutures are advisable.

Cases in which this osteoplastic operation will prove especially useful are those of injury to liver and spleen (stab- and bullet-wounds, as well as lacerations, due to a blunt force), also injuries and diseases of the diaphragm (hernia) and of the cardiac portion of the stomach. Inflammatory troubles (liver abscess and subphrenic abscess) will be attacked to better advantage, I believe, through or just beneath the complementary space of the pleural cavity after resection of one or more ribs.

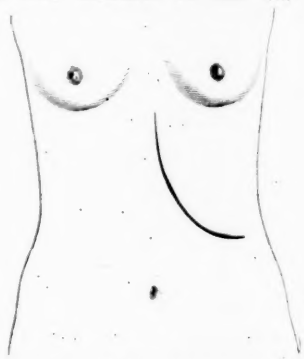

Fig. 16.—Oblique incision from xyphoid process to tip of tenth rib.

As far as I have been able to glean from the literature, osteoplastic resection of the costal arch has as yet received but little attention. It surely means a valuable addition to our operative resources. It renders possible much greater accuracy of work in a field hitherto more or less inaccessible.

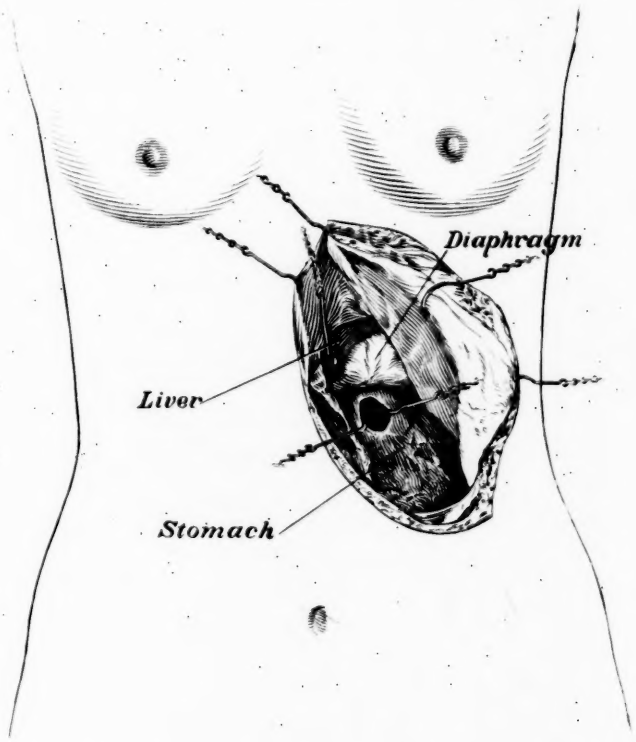

Fig. 17.—Oblique incision. After division of cartilages, as before, osteoplastic flap is raised, exposing vault of diaphragm and cardia, xyphoid process to tip of tenth

DISCUSSION.

DR. D. N. EISENDRATH, Chicago, asked why Dr. Meyer's operation would not be a practical one in the treatment of subphrenic abscesses following appendicitis, those that are situated between the diaphragm and the upper surface of the liver. These abscesses are comparatively common and the only way they can be dealt with at the present time is to go in below the costal arch, following up along the upper sur-

face of the liver, or to go in transpleurally, then there is danger of empyema.

DR. J. R. EASTMAN, Indianapolis, believed that Dr. Meyer's method of osteoplastic resection of the cartilages will have an important place in the treatment of gunshot wounds of the upper abdomen, especially those implicating the upper surface and the posterior border of the liver. He cited a case in point. A ball of large caliber passed in at the eighth rib, passing through the pleura, lung, diaphragm and upper border of the liver, causing great laceration and serious hemorrhage at the posterior upper margin of the liver. Cutting through the lowest ribs, he managed to plug in an unsatisfactory way the wounded liver. The patient died. Dr. Eastman thought that if Dr. Meyer's method could have been employed the result might have been different.

DR. WILLY MEYER, New York, stated that subdiaphragmatic abscesses are reached best by the transpleural route or, if possible, just beneath the lower end of the pleura by pushing the latter up bluntly. However, if continuous suture is made on either side of the pleural incision before opening the diaphragm, it is possible to avoid the appearance of a pneumothorax or empyema. Regarding the improved accessibility of shot wounds of the liver, etc., it stands to reason, he said, that by doing this osteoplastic operation we can reach the convexity of the liver equally as well as we can reach the spleen and cardia on the opposite side.

THE DIAGNOSIS AND TREATMENT OF TUBERCULOSIS OF THE KIDNEY.*

ARTHUR DEAN BEVAN, M.D.
CHICAGO.

Although Ammor as early as 1833 pointed out clearly the essential clinical points of kidney tuberculosis, it has only been within the last ten years that the diagnosis and treatment have been placed on a sound working basis, and even to-day the frequency and importance of the lesion is not generally understood by medical men. To those of us who have been medical students for twenty-five years or more the evolution of this subject during that period furnishes some interesting reading.

Ebstein[1] reviewed the subject and described the process as a cheesy inflammation involving the kidneys and renal pelvis and ureters, as one difficult to diagnose except in the presence of some evident tuberculous lesion; having a bad prognosis; as a condition in which the patient seldom lived more than a year. Ebstein states that all treatment is apparently hopeless. No suggestion of surgical interference is made.

In 1884 Henry Morris described the condition under the two titles of tuberculous disease and scrofulous disease of the kidney. He gives a very good clinical picture and says the treatment consists in alleviating pain and improving the general health. Further, he says that in tuberculous disease, in which the affection of the kidney is but a local manifestation of a constitutional disorder, nephrectomy would be useless, even if the other kidney were sound. When the scrofulous disease is limited to one kidney, nephrectomy promises much as a means of prolonging life by freeing the individual from a fatal malady.

In 1885 Samuel W. Gross read a paper on the subject of nephrectomy before the American Surgical Association, in which he collected twenty cases from the literature in which nephrectomy had been made for so-called strumous kidney, with twelve recoveries and eight deaths. An analysis of these cases showed that but the one kidney was involved in 65 per cent. of the cases, and that in cases in which a previous nephrotomy had been done no permanent relief was afforded by it, and he advises on this account an immediate nephrectomy when possible. Very few of these cases were done in America.

In 1885, in the German Congress of Surgeons, H. Fisher stated that all extensive operative procedures, "especially nephrectomy," for tuberculosis of the kidney should be condemned. In the same year von Volkmann said that he doubted whether operative treatment of tuberculosis of the kidney and kidney pelvis had any real value.

In 1891 Madelung collected sixty cases of nephrectomy for tuberculosis from the literature and reported three of his own cases. Eleven died from the operation and five within five months. He concludes that the operation is indicated when we can prove that the process is limited to one kidney.

In 1892 Tuffier reported twenty-five nephrectomies for renal tuberculosis, with 47.8 mortality and with but two definite cures, and fifty-seven nephrectomies, eleven abdominal, with 36.3 mortality, and forty-six lumbar, with 28.2 per cent. mortality.

In 1896 Dr. Willy Meyer,[2] New York, read a paper before the Medical Society of the State of New York, in which he emphasized the important facts that tuberculosis of the kidney is almost always at first unilateral and that it descends from the kidney to the bladder. He brings out clearly the value of the cystoscopic examination in making a diagnosis and calls attention to the peculiar appearance of the mouth of the ureter of the affected kidney. The mouth of the ureter, being indurated, presents a number of circumscribed, clearly defined, inflamed areas of mucous membrane between it and the trigonum. He says: "I could not compare this picture better than to liken it to the footprints in the freshly fallen snow."

He says too much stress can not be laid on the necessity of establishing a strictly defined diagnosis as soon as possible and of carrying out that treatment, which alone is the logical sequence of the same, to-wit: an early extirpation of the primarily diseased kidney.

In a monograph on tuberculosis of the genitourinary organs, published in 1897, Senn advocates nephrectomy, except in the cases in which the surgeon can satisfy himself that the opposite organ is present and in a healthy condition, and he dwells on the great difficulty of obtaining this evidence. Owing to the uncertainty of diagnosis during the early stages of renal tuberculosis and the existence of incurable complications in more than 50 per cent. of all cases, he says that the surgical treatment has not yielded as many permanent results as was anticipated during the early history of nephrectomy for this affection. He pleads for earlier diagnosis and earlier surgical interference.

In 1900 Ramsay, of Baltimore, published in the *Annals of Surgery* an article on renal tuberculosis, in which he collected 304 cases in which some form of operative treatment had been followed. Of these, fifty-five were nephrectomies with fifteen deaths within a month and but four cures. Of 191 primary nephrectomies there were 106 complete cures, thirty-one were improved, thirty-seven died within a month and seventeen later than one month after operation.

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* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. Ziemssen's Cyclopedia, 1877.

2. Meyer, Willy: "The Early Diagnosis of Tuberculosis of the Kidney," Medical News, March 7, 1896.

In 1901 Israel published his great monograph, reporting the kidney cases handled in his surgical clinic. Among these were thirty-one cases of tuberculosis. He made a nephrectomy in twenty-eight, a nephrotomy in two and a resection in one.

In 1903 Kuemmell and Rumpel reported the extensive kidney work of the Allgemeinen Krankenhaus in Hamburg. Among these are thirty-four cases of tuberculosis and among these thirty nephrectomies with twenty-seven cures and three deaths, and four nephrotomies, two deaths and two improved.

In 1904 Kroenlein reported on kidney tuberculosis and the results of operative treatment from his own clinic. He operated on thirty-nine cases of kidney tuberculosis, three times opened perinephritic abscesses, twice did nephrotomy and thirty-four times nephrectomy. He regards nephrectomy for tuberculosis, when limited to one kidney, as one of the most successful operations in surgery.

It is the intention to show in this brief paper that the views on the subject of kidney tuberculosis have changed greatly within the last twenty years, that to-day tuberculosis of the kidney is known to be a common disease, that it is almost always the result of infection through the circulation, that in 90 per cent. or more of the cases it is primary in a single kidney, that it is the duty of the general practitioner to diagnose early these cases and that it is the duty of the surgeon to operate on them early, because an early operation holds out a good prospect of cure. There was a time when the handling of a case of kidney tuberculosis was purely medical. In the enthusiasm of the early successes, surgeons said, tuberculosis of the kidney is a surgical disease and attempted to place the responsibility entirely on the surgeon.

We can say to-day that the responsibility of the successful handling of renal tuberculosis is divided equally between the physician and the surgeon. The physician must learn to recognize these cases early, at the time when the process is still limited, as it usually is, to one kidney; the surgeon must learn that the radical removal of the kidney involved holds out practically the only hope and, fortunately, a very large hope for the patient.

GENITOURINARY TUBERCULOSIS.

Before taking up the special subject of renal tuberculosis it will be necessary to say a word on the subject of genitourinary tuberculosis in general.

Within the last ten years the subject of tuberculosis of the genitourinary tract has been most carefully studied and new clinical and pathologic evidence obtained and carefully analyzed. This has been made possible by additions and refinement in our means of diagnosis. Of these, the careful examination of the catheterized centrifugated urine for tubercle bacilli, pus, blood, etc., the obtaining of the urines from the two kidneys separately by means of various segregators and especially by catheterizing the ureters, more frequent and intelligent employment of the cystoscope and the use of the *x*-ray and cryoscopic examinations of the blood and the urine and the more systematic histologic examination of tissue removed at operations, must be mentioned as the most important. Tuberculosis of the genitourinary tract, with but few exceptions, begins at one of four points: the kidney, the prostate, the epididymis and the tubes. It is difficult to state which is the most common focus of infection, although evidence has seemed to favor the conclusion that the kidney and the tubes and the epididymis are the common foci and are primary in about an equal number of cases, the prostate occupying the fourth place with a smaller but very considerable percentage of cases.

The kidney, tubes, prostate and the epididymis are, as a rule, primary only in the sense that in the individual affected they are the overshadowing and important focus of the disease. They are strictly secondary to a small, unimportant focus in the lymphatic glands, bones or lungs, the infection occurring through the blood. Infection of the genitourinary tract through the urethra and vagina, as in gonorrhea, is to be admitted as a possibility, but must, as a clinical fact, be exceedingly rare. Probably the most important practical result that has been obtained from these more recent studies has been the knowledge that primary kidney tuberculosis is exceedingly common, and in probably 90 per cent. or more of the cases is for a time limited to the single kidney first attacked. The work of Kuemmell, Kroenlein, Israel, Simon, the Mayos and myself has confirmed this fact. This knowledge has changed very materially our views in regard to the treatment and prognosis of these cases.

When the process is still limited to the kidney first involved, an early nephrectomy gives an excellent prognosis, both as to immediate and permanent results. On the other hand, the lesser operations, which have been so much employed, resection of the kidney and especially nephrotomy, are to be generally discarded. In the light of our present knowledge, resection in kidney tuberculosis has no place and nephrotomy is to be resorted to only as a palliative operation or to relieve urgent symptoms, such as sepsis and pain when the local condition is complicated, as, for instance, with a perinephritic involvement, or when the bad general condition of the patient makes the more radical operation unwarranted at the time. But even in these cases secondary nephrectomy is usually required in order to bring about a cure.

Tuberculosis of the bladder is seldom primary and is secondary to kidney tuberculosis, tuberculosis of the prostate or an extending tuberculosis from the epididymis. The treatment of this condition is still one of the unsolved problems of surgery and is to-day as unsatisfactory as it has ever been, with the exception of the cases of limited involvement of the mucosa, secondary, for example, to a primary focus in the kidney. In these cases it is not infrequently found that after the removal of the primary focus the limited lesion of the bladder undergoes a spontaneous cure. Ascending tuberculosis from bladder to kidney is probably rare.

Tuberculosis of the prostate was formerly believed either not to occur at all or to be exceedingly rare. Our recent studies have shown that primary tuberculosis of the prostate is by no means uncommon and that it forms a distinct proportion of cases of genitourinary tuberculosis.

Tuberculosis of the epididymis is exceedingly common, and when it is primary and limited to this organ radical removal has resulted in cure in about 40 per cent. of the cases. From the epididymis the vas and seminal vesicles and prostate may become involved and later general tuberculosis, or, infrequently, the bladder and kidneys.

Tuberculosis of the tubes is exceedingly common; the process frequently involves the ovary and peritoneum and occasionally the uterus.

Primary tubal tuberculosis rarely leads to involvement of the kidney, except in cases of such widespread tuberculosis that surgical treatment of the kidney would be excluded. In all these forms of genitourinary tuberculosis the great benefits to be derived from the outdoor, open-air and general hygienic treatment must be recognized as of great importance and must be taken advantage of and insisted on in all cases. This becomes very clear when we remember that even in the cases in which there is no evidence or history of a primary focus elsewhere in the body, nevertheless such a primary focus probably does exist and remains even after the radical surgical removal of the focus in the genitourinary tract.

Tuberculosis of the kidney is a common disease. It occurs at all ages, but is most common from 20 to 40 years of age. Women seem to be more often affected than men, about two to one, although on this point there is a divergence in statistics. It occurs in postmortem statistics more frequently as a bilateral lesion.

Report of 12,732 autopsies at Kiel showed that of the cases of renal tuberculosis 62.3 per cent. were bilateral and 37.6 per cent. unilateral.

The *clinical* evidence is different. In Kroenlein's cases 92 per cent. were unilateral and 8 per cent. bilateral. Israel found but 8.3 per cent bilateral. Facklam found but 9 per cent. bilateral. Kuemmell found but 12 per cent. bilateral. Israel concludes that if our attention is called to these cases early we should find 90 per cent. of them unilateral.

In surgical clinics in which kidney fixations are limited to suitable cases tuberculosis of the kidney usually furnishes the largest percentage of any single pathologic process, being more frequent than stone or tumor; tuberculosis of the kidney is frequently found associated with other evident tuberculosis, as tuberculosis of lung, cervical glands, bladder, bones and joints, and genital tuberculosis, as epididymis or tubes. Kidney tuberculosis is sometimes associated with other pathologic conditions, as an old gonorrheal invasion or renal calculus and hypernephroma.

SYMPTOMS.

Renal tuberculosis can and does undoubtedly run at times a silent course, without giving rise to any symptoms even when a single kidney has been entirely destroyed. The most common symptom is an increased frequency of urination. This frequency is seldom very great, unless there is present some degree of cystitis. There may be some pain on urination, but this, where marked, usually speaks for an involvement of the bladder. The patient may notice that the urine is cloudy; pus in the urine and blood in the urine are important symptoms.

In probably 25 per cent. of the cases blood is noted as a symptom. Sometimes a large quantity is found, even sufficient to fill the bladder and to cause an attack of renal colic by obstructing the ureter. More often it is slight or even microscopic in amount; pus is present in varying amounts, not infrequently there being a mixed infection with staphylococcus albus or colon bacillus. In advanced cases the segregator or ureteral catheter may show nothing but pus coming from the ureter, the kidney secreting substances being almost entirely destroyed.

Pain in the kidney region and radiating to the bladder along Poupart's ligament may be present, either as a sense of soreness and a dull ache or an acute attack of renal colic simulating stone and due to the plugging of the ureter with blood or tuberculous débris. When a perinephritic involvement occurs the tenderness and pain characteristic of such a process are present in the costovertebral angle. Temperature occurs in a fair proportion of cases (of the tuberculous type with slight elevation in the evening), or again as exacerbations which come on at intervals and last several days.

In well-marked cases, as in tuberculosis elsewhere, the general evidences of grave constitutional disease, i. e., loss of strength and weight and secondary anemia, are present. A swelling in the kidney region, due either to an enlargement of the kidney or to a perinephritic process, is present in a limited percentage of cases.

The differential diagnosis must be made between other inflammatory lesions of the urinary tract, simple pyelitis and pyelonephritis and kidney stone and neoplasm, and such rare and obscure lesions as the so-called essential kidney hemorrhage and polycystic degeneration of the kidney.

In my own clinic I find that the cases of simple pyelitis and pyelonephritis have been few as compared to the tuberculous cases and the other pathologic processes simulating tuberculosis. As a rule, the simple pyelitis and pyelonephritis sustain about the same relationship to tuberculous infections of the kidney as far as onset and history are concerned as does acute osteomyelitis of the upper end of the femur to hip-joint disease, i. e., there is not infrequently the history of the existence of a preceding suppurative process elsewhere, as a carbuncle, a furuncle or an acute infective process, as a grip or pneumonia, or an infection of the lower urinary tract, and then the sudden acute onset of the symptoms, with chill, temperature and pain, enable one to make the differential diagnosis between an acute suppurative infection and the chronic process of the tuberculosis. When an acute suppurative infection occurs in a tuberculous kidney, which has not been previously recognized, the diagnosis may be difficult or impossible.

In my own work I have been especially interested in the differential diagnosis between tuberculosis, stone, tumor, polycystic kidney and essential kidney hemorrhage. We have been confronted with this problem in sixty cases, in which the pathology was later determined by operation. Of these, twenty-eight proved to be stone, seventeen proved to be tuberculosis, ten proved to be hypernephroma, four proved to be essential kidney hemorrhage, one proved to be polycystic kidney, unilateral.

All of these pathologic conditions may present the following symptoms in common: 1. Blood and pus in urine. 2. Pain in kidney region and attacks of kidney colic. 3. Tenderness in kidney region. 4. Enlargement in kidney region. 5. Bladder symptoms more or less marked. 6. Constitutional symptoms, loss of weight, etc. 7. Slow onset of symptoms and chronic course.

We have attempted to make the differential diagnosis by means of: 1. Careful history and physical examination. 2. An *x*-ray examination. 3. A careful examination of urine for tubercle bacilli, etc. 4. A cystoscopic examination of the bladder. 5. Cryoscopic examination of the blood.

In the ordinary case, when this differential must be made, we adopt this line of procedure:

1. Several *x*-rays are obtained, which show satisfactory differentiation of the structures. If stone is found the diagnosis is made; if no stone is found, stone is excluded as a probable diagnosis in our work. The percentage of error in negative cases has been but 3 per cent.

2. In these negative cases, then, the urine is carefully examined for tubercle bacilli. If found, the diagnosis is made; if not found after a week's careful search, tuberculosis is not excluded, because we have failed to find tubercle bacilli in about one-half of our cases.

3. The bladder is then examined and if bacilli have been found the ureters are catheterized to determine whether the process is limited to one or involves both kidneys and the mouth of the ureter is carefully examined.

4. In the cases in which the *x*-ray is negative and the examination of the urine for tubercle bacilli is negative, and when an enlargement of the kidney exists, the diagnosis of hypernephroma is most probable. We have been able to make this diagnosis in five or six cases on these grounds.

5. We make a cryoscopic examination of the blood, not of the urine, with the belief that in hematuria if the process is limited to one kidney we shall find the normal freezing point of — 0.56; if both kidneys are involved and kidney insufficiency exists, the cryoscopic examination will show — 0.60 or above.

Following the above methods, in this list of sixty operations we have been able to make the correct diagnosis in more than fifty cases. In only six or eight were the operations begun as exploratory operations.

TREATMENT.

The treatment of tuberculosis of the kidney depends to-day entirely on the facts as to whether one or both kidneys are involved. As already pointed out, in 90 per cent. or more, the process is an infection through the circulation and is limited to one kidney.

In these cases, there is but one operation to consider and that is nephrectomy, the removal of the diseased kidney. If, because of the existence of a mixed infection, the patient's condition is such as to make an immediate nephrectomy out of the question, a nephrotomy with drainage should be made simply as a palliative operation and with the understanding that, as soon as the condition of the patient permits, a radical operation of nephrectomy should be made.

A resection of the kidney is to be practically discarded from consideration. The multiple foci, which are disclosed by a careful examination of all the tuberculous kidneys removed at operation, show how useless such a procedure is.

When both kidneys are involved, the treatment must be nephrotomy and drainage in cases in which there are large abscesses, and the fresh-air and outdoor treatment of widespread inoperable tuberculosis.

OPERATIVE TECHNIC.

In uncomplicated and early cases a nephrectomy for tuberculosis presents few difficulties. An oblique incision, extending from a point a finger's breadth below the last rib and just external to the erector-spinæ muscles, is carried downward and outward to a point a finger's breadth above the crest of the ileum. This divides the skin, superficial fascia, latissimus dorsi muscle and the layers of the lumbar fascia down to the fatty capsule of the kidney. This incision runs about parallel with the lumbar nerves and these, as a rule, can be avoided. The kidney is entirely freed from its surroundings and brought outside of the wound. The ureter is ligated separately from the vessels. The vessels are double ligated with middle-sized catgut. The inside of the mucosa of the ureter, distal to the ligature, is cauterized with pure carbolic acid.

For a time it was believed that it was very necessary to remove the entire ureter. More recent experience seems to show that this is unnecessary and that the ureteral mucosa, even though involved in the disease, gradually recovers after the removal of the primary foci in the kidney proper. The external wound is closed with the exception of a cigarette drain carried down to the stump of the ureter and the great vessels. This is removed at the end of forty-eight hours.

RESULTS.

I know of no more satisfactory results in the whole field of surgery than those which are obtained by an early nephrectomy in unilateral kidney tuberculosis. With this fact established, it becomes our duty to make it more widely known and to plead for early recognition and early radical operation for kidney tuberculosis.

On the seventeen patients which I have handled surgically for tuberculosis, 21 operations were performed, 12 nephrotomies, 7 nephrectomies, 1 opening of a perinephritic abscess and 1 resection. Nephrotomy was made in most of the cases in my earlier work. None of these proved curative. The same result followed in the single resection which was performed. The histories of the seven nephrectomies have been very satisfactory. They have all recovered from the operation, except one, and have been apparently entirely cured.

The one fatal case is a case in which a nephrotomy had been done with a slight temporary improvement. A nephrectomy, which was performed later, was made extremely difficult by the extensive perinephritic inflammation, which resulted from the first operation. An ill-advised attempt was made to remove the kidney with its capsule. This made the operation very bloody and very prolonged, the patient dying of shock within a few hours. Since that time we have saved similar patients by removing the kidney from within the fibrous capsule, when the perinephritic adhesions are dense, which is a much easier and safer procedure and seems to give very satisfactory results.

DISCUSSION.

DR. VAN BUREN KNOTT, Sioux City, Iowa, stated that the old surgical conceptions and ideas of the pathology of renal tuberculosis gained from postmortem records are being constantly revised by antemortem or operation statistics. It was commonly believed only a few years ago that kidney tuberculosis was an entirely hopeless affection; that surgical treatment did not offer anything very satisfactory in the way of results; and time and again the pendulum swung back and forth between medical and surgical treatment. Postmortem records nearly always showed bilateral disease of the kidney, when in nearly every instance kidney tuberculosis is primarily unilateral. A descending infection may and very frequently does occur; the bladder becomes involved, and if the case is neglected and is allowed to go on for an unreasonable length of time, it is only a question of months before the second kidney is involved. This being true, the duty of the physician is very clearly outlined. The patient should have not only dietetic and hygienic treatment, as recommended by the physician, but surgical treatment as well.

The diagnosis is of extreme importance. It is only by early diagnosis that proper treatment can be instituted. This is another one of the diseases where the only treatment that can accomplish anything is that which is instituted early. The use of the cystoscope in these cases is of the greatest assistance, although frequently cases are encountered where its use is very unsatisfactory. With a tubercular contracted bladder, the use of the cystoscope at times is extremely difficult, and catheterization of the ureters, or of one ureter, has, in some instances, been found to be a difficult procedure. In some cases it has been necessary to expose the second kid-

ney, making a definite diagnosis of the condition existing in the kidney known to be diseased. As a rule, it is a reliable method of determining the condition of the other kidney before attempting to do a nephrectomy on the diseased kidney. Dr. Knott had one unsatisfactory occurrence. After removing the kidney the patient's condition became alarming and death ensued. The second kidney, which had been supposed to be healthy, was found to be in an advanced stage of tuberculosis. So that even inspection of the second kidney does not always lead to the safest results.

As to cystoscopic pictures of the bladder, he has been able many times to find conditions made plain by finding advanced congestion in the neighborhood of the ureter. Dilatation of the orifice of the ureter is typical of kidney tuberculosis, and in most instances the catheterization of that ureter will not be necessary, as such a dilated orifice speaks sufficiently loudly for tuberculosis of the kidney.

Nephrotomy, he believes, was justly condemned by Dr. Bevan as a palliative operation. The attempt to conserve any portion of the kidney tissue is a mistake. He has had two cases in which attempts to conserve partially tuberculous kidneys by resections of a small portion of the viscus were followed by results which made resection of the whole kidney necessary. He emphasized that the treatment of tuberculosis of the kidney is now in the critical stage and that the future of this treatment will depend on the early recognition of the disease and the immediate institution of a radical operation, which in all instances should be nephrectomy when the disease can be located and is confined to one kidney.

DR. HOWARD A. KELLY, Baltimore, said that his experience with tuberculosis of the kidney covers about 49 or 50 personal cases, and a considerable additional number of cases in the hands of his associates, Drs. Hunner and Cullen. He has found that tuberculosis of the kidney is a very common affection. He was interested to know the frequency in which tubercular lesions in other regions are found in these cases. Very often the patient has had a tubercular joint lesion of an obscure or a manifest nature; or there have been lesions in the glands or in the bones; or, sometimes, a latent pulmonary lesion. The history of these cases always should be gone into very carefully.

In women the disease is almost always primary in the kidney. Dr. Kelly has never met with a case suggesting an ascension from the bladder to the kidney, nor does a clearly proven case exist in the literature. In men, where bladder tuberculosis originating from a testicular tuberculosis is common, as compared to the frequency of bladder tuberculosis without kidney involvement in the woman, it may occur. It is possible to picture an involvement of the vesical end of the ureter leading to stricture of same and a consequent hydroureter above, thus producing conditions favorable to the tubercular ascension. While granting the possibility of such an occurrence, it must be kept in mind that clinical autopsy and experimental facts all speak for its rarity. In women it is always of great importance to investigate the condition of the genital organs. There is a common association between renal tuberculosis and tuberculosis of the uterine tubes and even of the uterus itself. He has had several such cases. The first two or three came as surprises, but lately he has been looking out for them very carefully. Dr. Kelly had a patient who had a pelvic tumor and tuberculosis of the right kidney. When he opened the abdomen he found a disseminated tuberculosis, the peritoneum looking as if it had been peppered. He took out the much-involved pelvic organs, after which he did a right nephro-ureterectomy. The association of tuberculosis with hydronephrosis is remarkable, particularly with stone. The first case of this kind he saw was a patient whose physician had removed a kidney stone. Several years later she had tuberculosis in the same kidney and it was removed.

As to the diagnostic signs, it is not the common ones which demand attention, but the uncommon ones. Pain is not always a satisfactory sign, for the patient may have pain in the wrong side. The size of the kidney may be misleading, because a normal kidney may be hypertrophied. Tubercle bacilli in the urine can be demonstrated in some cases of pulmonary phthisis, without renal involvement, particularly if the twenty-four hours' urine is examined. Dr. Kelly also referred to a tubercular case in which the woman had been advised to have the wrong kidney taken out because it had a large ureteral orifice on that side. He has a patient with tuberculosis of the urinary tract, who had a golf-hole orifice on one side and a large red ureteral orifice on the other. He felt sure that the former was the affected side, but when he cut into the kidney there was no disease. He then cut into the other kidney and there also was no disease. It was a case of primary tuberculosis of the bladder with these interesting signs.

He noted the very common occurrence of stricture of the ureter in these cases. In two early cases he was misled and sent the patient back to her physician with a diagnosis of stricture of the ureter. She undoubtedly had the stricture, but it was due to tuberculosis of the ureter above the strictured portion. Nephrotomy, he said, may be necessary as a temporary means to relieve the patient, but nephrectomy must follow. Resection should not always be urged because Morris took out a kidney on one side and then the patient developed tuberculosis in the other kidney. He did a nephrectomy and four years later the patient was in good health and able to work at service.

DR. WILLY MEYER, New York City, believes that tuberculosis of the kidney is a very common disease, much more common than it has been thought to be in former years. The principal point is to make the correct diagnosis. It must be of value to have some more or less distinct clinical symptoms which will cause the surgeon to suspect the disease. Pain is a very important sign; but, according to his experience, a far more significant symptom is that of frequent urination with tenesmus (sometimes appearing in distinct attacks) not only during the day, but during the night. If a younger patient says that he has frequent urination, both during the day and during the night, that he has had renal colics with pus and blood in the urine, he at once suspects primary renal tuberculosis, especially if there has been no gonorrhea and the patient has never been subjected to intravesical instrumentation. If tubercle bacilli are then found in the urine, the diagnosis is established. In order definitely to locate the disease, he insists in these cases on cystoscopy. Of course, the bladder is here frequently contracted and irritable, and there is a great amount of catarrh, etc., but, if one will take the trouble to carefully irrigate the viscus, preferably with a weak bichlorid solution, after due cocainization, he will soon be able to introduce a sufficient amount (three ounces) of boric-acid solution to permit of a cystoscopy. If in such a case he sees the mouth of one ureter healthy and that of the other injected, or rather ulcerated, he diagnoses unilateral descending tuberculosis. He considers this cystoscopic picture the most important pathognomonic sign in determining which side is diseased. It is of greater value than unilateral pain.

Dr. Meyer fully agrees with Dr. Kelly that pain is sometimes misleading. In one of the cases observed by him, the patient complained of constant pain on one side, tubercle bacilli were found and he thought the diseased kidney would be on the painful side. He did cystoscopy and there was pronounced ulcerative catarh. The picture was blurred. He treated the man for a week or two and then repeated cystoscopy. He found an ulcerated ureteral mouth on the other side, and the one corresponding to the painful side was healthy. On the basis of this finding he diagnosed primary renal tuberculosis of the opposite side and cut down on that kidney. It proved to be the seat of the disease and was removed. The patient is well to-day.

Catheterization of the ureters can be dispensed with in the majority of these cases. If recurrent attacks of pain are located on the side that shows the ulcerated mouth of the ureter, and if tubercle bacilli are found, the diagnosis is still more firmly established. Therefore, in suspicious cases, the cystoscope should be used as soon as possible. If the mouth of one of the ureters is ulcerated, there is a descending tuberculosis. If the mouth of neither ureter is ulcerated, but if pyelonephritis is made out by urinary analysis, and tubercle bacilli are found, there is an ascending tuberculosis.

The kidney which is diseased should be removed, and the earlier it is removed, the better. Then send the patient out into the country, into the mountains, if possible. Let him benefit from hygienic régime, after he has had surgical treatment.

DR. JOSEPH RANSOHOFF, Cincinnati, stated with regard to ascending tuberculosis of the kidney that there is such an occurrence as the result of a primary disease of the vesicles, the prostate or the testicles, with secondary involvement of the bladder. Otherwise it is always a descending tuberculosis. A non-motile bacillus can not travel up stream. Tuberculosis of the testicle is always an ascending tuberculosis from the epididymis running toward the prostate. He said that he understood Dr. Kelly to say that very frequently in women tuberculosis of the kidney is associated with tuberculosis of the genital tract. There is one thing that calls attention to the fact that tuberculosis is descending when coming primarily from the kidney, and that is, that tuberculosis of the kidney occurs as often in women as it does in men, and in women it could not have any association with the genital tract and become an ascending affection. Tuberculosis of the kidney must be kept absolutely separate and distinct from tuberculosis of the genital tract, in the male as well as in the female. Dr. Ransohoff said that some years ago he read a paper before the American Surgical Association on the treatment of tuberculosis of the kidney, and called attention to the fact that nephrotomy ought not to be done as a final operation. On that occasion he did report one case of partial resection, and that patient had done well since, but it ought not to be done often. Quite recently he had a tubercular kidney for removal. One of his assistants suggested that he save the kidney, taking out only the one pole that was involved. He made a section of that kidney and there were minute deposits in the cortical substance that would certainly have given rise to trouble later on.

He invariably makes a laparotomy to determine whether or not the other kidney is there. If it is in the right place, feels right and is of the right size, he takes it for granted that the kidney is doing its work right. If it is not, God help the patient. Even catheterization of the ureters and cryoscopy will fail sometimes to aid in making a correct diagnosis. The individual case must decide what operative procedure is to be adopted.

DR. E. W. LEE, New York, referred to the case of a young man who two years ago received an injury to the testicle while playing football. Dr. Lee removed both testes because they were tubercular, and now that young man is suffering from tuberculosis of both kidneys, which has been demonstrated conclusively by catheterization of the ureters.

DR. L. L. MCARTHUR, Chicago, thinks it a mistake to let the dictum go out that all tubercular kidneys should be removed as soon as the diagnosis is made. That is, it would be a mistake to advise or to counsel the profession to remove kidneys affected with a severe mixed infection, from which the patient has been suffering for weeks, and is in practically a septic condition. Under these circumstances it is perfectly justifiable, and this is borne out by practical experience, to first drain that kidney, let the fever subside and restore the patient to good condition. Then perform the nephrectomy, but not until then.

The New Public Hospital at Berlin.—The great Rudolf Virchow Hospital is nearing completion. The total expense has been nearly $5,000,000. There are 57 separate buildings with 3,400 rooms, exclusive of the basement. The capacity of the hospital is 2,000 beds, divided as follows: 564 beds in the 11 buildings of the surgical service; 500 beds for the 10 buildings for internal medicine; 95 each for the obstetric and gynecologic wards; 11 beds for septic cases; 24 for the quarantine building; 34 for the diphtheria pavilion; 120 in the 4 infectious diseases pavilions; 18 beds for unruly patients, and 374 for males with venereal disease, with 146 for female cases. Some of the buildings have been in use for some time, the museum even before Virchow's death.

SODIUM CITRATE IN INFANT FEEDING.*

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The infant deprived of the breast must, in relation to his feeding, be regarded as a pathologic problem. That this statement is axiomatic is shown by the fact that more earnest work has been bestowed on infant feeding during the past twenty years than on all other pediatric subjects combined. That the problem is still unsolved the high relative mortality and later morbidity of artificially fed infants bear constant witness.

The six essentials of Cheadle, enunciated by that observer some time in the '80s, bear witness that the essential requirements of an artificial food for babies were broadly understood 20 years ago. Quoting from memory, they are briefly as follows: 1. Sterility. 2. Antiscorbutic property. 3. Quantity. 4. Some animal constituents. 5. Form suitable. 6. Constituency. Much has been learned since Cheadle by amassing clinical results and observations. Meanwhile the deductions from *a priori* reasoning have proven unsatisfactory for the simple reason that so little was known of the physiology of infant digestion. Latterly the premises from which we reasoned have been proven, almost without exception, to be incorrect.

Thus the great American experiment known as the exact percentage method of feeding required that the baby's diet should consist wholly of cow products and water, so modified in its five gross constituents as to coincide quantitatively with similarly named constituents of average breast milk. One other ingredient only was allowable in this feeding mixture, viz., some alkalin solution, as lime water, sodium bicarbonate or magnesia. This dogma, which in connection with laboratories established throughout the country had almost become a cult in infant feeding, was practically based on seven assumptions, which have recently been proven erroneous, to wit:

1. The qualitative similarity in breast and cow's milk of the lactose, fats, albuminoids, proteids and their chemical combination with the milk salts.

2. The claimed alkalinity of breast milk in contradistinction to the acidity of cow's milk.

3. The possibility of a synthetical substitute for breast milk from cow products alone.

4. The claim that cereals were not allowable because indigestible in the infant's secretions and that they induced dyspepsia and intoxication by acting as decomposing foreign matter.

5. That cereal gruels were no more efficient in the prevention of dense milk coagula than dilution with plain water.

6. That HCl played no part in the digestive process until later infancy.

7. That the important proteid content of the baby's food could be made up from the non-coagulable whey albumin of cow's milk.

The elucidation of facts in refutation of these premises is due to the earnest work of a number of men, prominent among whom as members of this association may be mentioned Chapin on cereal gruels and gastric development, Kerley on milk reaction and alkalinization, Shaw on HCl secretion in infants, Stern on milk fats, Southworth on the art versus the science of infant feeding, Morse on acidified milk and buttermilk feed-

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

ing, and the recent unsurpassed work in chemistry of milk by Van Slyke and Hart at Geneva. Most of these contributions have enriched our literature and become familiar to all. The subject is still a broad one. I disclaim any intention of attempting in this limited paper to deal with it *in toto* and indulge in these preliminary observations merely to emphasize the fact that no royal road to successful feeding by exact mathematical formulas has yet been found. Nor do I wish to convey the impression that I would belittle the value of attempts at accuracy in determining the component parts of the infant's dietary.

Great credit is due and will ever be associated with the name of Dr. Rotch as the founder of a system which has not only served as an hypothesis for tentative feeding, but has stimulated to greater accuracy and more careful clinical observation and recording of results than was possible by any other method. As an enthusiastic advocate of the so-called American method, I am on record frequently both at home and abroad. I may be pardoned if I suggest that the tendency in general is too much along the line of the refinement of mathematical formulas to the neglect of the obvious importance of gastric development along normal physiologic lines.

The spectacle of a marantic infant with persistent curds in the stools, though cow proteids have been reduced to the extreme limit of attenuation by dilution with water, is a familiar one. So, also, too commonly in evidence is the child fed long, but not nourished, on whey proteids and cream whose gastric vigor has not progressed beyond that of early infancy.

Important as the rôle of carbohydrates and fats in infant development may be and difficult as the problem of properly dealing with fats is, it is to the management of the proteids that I beg to call your attention in the few minutes allowed. Their importance in the nutrition of the child needs no emphasis, as it is universally accepted both theoretically and clinically.

The intolerance of the infant's digestive organs to cow proteids, so widely different from those for which they were intended, is also well known. Of the many methods in vogue for the establishment of toleration of these refractory curds the one most common, unfortunately, is their quantitative reduction by dilution far below percentages absolutely necessary for the development and growth of the child. In fact, the common advice to infant feeders on percentages of milk in recognition of its refractoriness is either to restrict the proteid percentage far below that which is known to obtain in average breast milk (as though Nature would commit the absurdity of elaborating the necessary amount of proteid from even a less quantity when presented in the more obstinate form of cow casein), or to substitute the non-coagulable proteids of whey.

In either case Nature is cheated of her absolute demands. The pathetic malnutritional results of low proteid feeding, both immediate and remote, are too familiar to us all to need further elaboration. Aside from this slow starvation and stunted growth with its diminished resistance to intercurrent disease from insufficiency of nitrogenous food, abundance of proteids is demanded in a coagulable form for the normal development of the gastric function, as ably shown by Chapin and corroborated by a host of clinical observers. This the infant gets at the mother's breast in proteids which clot on admixture with the gastric contents in soft, flocculent, semi-solid coagula which readily pass the pylorus in a form suitable to intestinal digestion and absorption.

The important question, then, in feeding cow's milk is not how to reduce the proteids and sustain life, but how to *increase* the proteids and maintain unimpaired digestion. Buttermilk has been tried; acidulated milk has been tried; admixture with gruels has been tried; koumiss, matzoon and kephir milk have been tried; the addition of various alkalies is much in vogue; all with varying degrees of success, and each measure has its ardent advocates. That the question is not yet settled this diversity of opinion amply indicates. It is still an open field, and the cry that no chemical tampering with the milk should be encouraged need deter no one, since it is proven beyond dispute that cow's milk, however modified, is not a natural food for the human infant. The more orthodox observers of the original laboratory percentage modification have from the first chemically tampered with the milk in the addition of lime water, sodium bicarbonate, etc., in the mistaken notion of humanizing the mixture by rendering it alkalin. That we reached further than we intended in our administration of alkalies and secured toleration of the curds through neutralization of the normal gastric acids does not lessen the evils of inhibition of those digestive processes which can occur only in an acid medium.

Since deductive methods from *a priori* reasoning have thus far failed of a satisfactory solution of this problem, let us welcome inductive methods conducted along rational lines, since massed clinical evidence must ever be the tribunal before which all methods must come to trial. Whether *secundus artem* or *secundus scientiam*, it is the greatest number of babies who live and thrive and resist disease that demonstrates the merits of their hygiene.

AUTHOR'S EXPERIENCE.

It is with the firm conviction that sodium citrate, through its inhibition of dense coagulation of cow's milk in the presence of an acid and rennin, may prove valuable in the solution of the proteid problem that I present a brief résumé of my experience with this agent.

More than two years ago in a personal letter from one of my assistants, Dr. J. W. Vanderslice, who was studying abroad, my attention was called to this use of sodium citrate. The reports from Dr. F. J. Poynton's clinic at Great Ormond Street, London, from which the writer as an eye witness drew his conclusions, seemed sufficient to justify a careful consideration of this new method of overcoming some of the obstacles in the adaptation of cow's proteids to infant digestion.

Rather cautiously, I began prescribing the citrate in cases in which varying milk mixtures had been used with poor success. Later, as I found that infants would tolerate a larger proportion of the milk in the feeding mixture when citrated than by any other modification known to me, I used it more boldly, so that during the past two years I find a record of its employment for a longer or shorter period in more than 50 cases in both hospital and private practice. I have here, by the courtesy of Dr. J. D. Merrill, a report of 8 cases in which she has carefully observed its effects for a considerable time, also by the courtesy of Dr. Vanderslice a history of 29 cases reported by him at different times to the Chicago Pediatric Society. In addition to this I have read carefully Dr. Shaw's[1] report of 22 cases, making a

1. Shaw: Arch. of Pediatr., March, 1906.

total of 112 cases embracing nearly all conditions from simple dyspepsia to marasmus and ranging in age from the new born to adults who have suffered from milk dyspepsia.

Sodium citrate being very soluble in water, the method of employment is simple, as follows: An aqueous solution is ordered containing from 1 to 5 gr. to the dram. A quantity of this solution is furnished the mother or nurse with instructions to add to the baby's bottle immediately before feeding enough of the solution to represent 1, 2 or even 3 gr. of the citrate to each ounce of milk in the feeding mixture, according to the prescriber's idea of the requirements. The feeding mixture may consist of varying dilutions of milk with water or gruel with the addition of cane or milk sugar, with or without cream. No alkalies are added, the sodium citrate used being a neutral salt. A most noticeable feature in this method of feeding is the large proportion of milk in the feeding mixture that the infant will tolerate without evidence of gastric disturbance or the appearance of any considerable amount of undigested casein in the stools. In fact, the stools of babies fed on citrated milk have come to be regarded by Drs. Merrill, Vanderslice and myself as positively characteristic, being firm enough to show form on the diaper, free from fecal odor and homogeneous in color and consistency. The slight tendency to constipation mentioned by Dr. Vanderslice I have observed in a number of cases in which I attributed it to the low percentage of fat in the food, consisting of equal parts of milk and water or even one part of milk to two of water. In but few instances have I observed this constipation where the fat contents of the mixture equalled 3 per cent.

One indication for the increase of the sodium citrate, even in some cases to as high as 3 gr. to the ounce of milk, is vomiting of curds. Another indication is the appearance of curds in the stools, care being taken to exclude indigestion from excess or intolerance of fats. Of the stools, J. H. Salisbury, professor of chemistry, to whom they were submitted, reports as follows:

> Three samples of the feces of infants fed with milk modified by the addition of citrate of sodium were examined. The feces were yellow, of a moderately firm consistence and remarkably homogeneous. On microscopic examination a few round masses, probably calcium soaps, could be seen scattered through the otherwise very fine débris. In two specimens short crystals of soaps could be detected. No free fat was found. On treatment with acetic acid more or less acid crystals could be observed and in one specimen this was especially marked. Chemical examination of one specimen for proteids was negative.

The duration of the administration of the sodium citrate, as well as the quantity employed, varies considerably in different cases, the purpose being to bring the baby's feeding up toward whole milk as rapidly as possible. As toleration is established the amount of citrate is reduced to one, to one-half and to one-fourth of a grain per ounce of milk until it can be discontinued. It happens not infrequently that the citrate is profitably resumed on the recurrence of signs of indigestion. In but 6 cases have I felt obliged to discontinue the citrated milk and adopt other methods of feeding. Some of these were among my early cases which, if occurring later, would possibly have received a more persistent treatment with citrated milk.

In consideration of this subject three questions naturally arise: 1. Is the employment of sodium citrate any better than other methods of rendering cow proteids tolerable and digestible? 2. Is its employment harmful? 3. In what manner does it act?

In answer to the first I would say that this method seems to allow a more rapid increase in the proportion of milk ingested than any other known to me. Moreover, the frequency of relief from milk indigestion on the addition of the citrate and the favorable reports from all whom I have known to give it a thorough trial are not without significance. In regard to its harmfulness no case of citrated milk feeding has been brought to my attention in which there appeared to be cause for regret because of the employment of this method.

Concerning its manner of action in a chemical sense there appears to be some difference of opinion. Professor Salisbury, above quoted, to whom the question was submitted, states as follows:

> Citrate of calcium is insoluble in water, but dissolves readily in solutions of the alkali citrates. It is to be presumed, therefore, that when a solution of sodium citrate is added to milk which contains calcium in combination with casein a reaction would occur producing a sodium combination of casein and an insoluble calcium citrate. The latter would dissolve on the addition of an excess of sodium citrate. It is to be presumed, therefore, that the milk treated with citrate of sodium contains a sodium compound of casein and calcium citrate held in solution by the presence of sodium citrate. Such milk would not yield a curd containing an excess of calcium, but the calcium would be found in the whey as well as in the curd. The experiments of Dr. R. Aibinder do not contradict the theory of Poynton that sodium citrate acts by separating the calcium from the casein, thus rendering it less easily coagulable. Sodium citrate would react with hydrochloric acid solution to form sodium chlorid and citric acid. The decomposition would not be complete but so nearly so that a large quantity of sodium citrate would neutralize nearly all the free hydrochloric acid of the gastric juice. Too large an amount of sodium citrate in the milk might, therefore, interfere with the digestion of proteids in the stomach. Such digestion might occur in the intestine from the action of the pancreatic juice.

The physical behavior of citrated milk *in vitro* is obvious and may be demonstrated in a simple manner suggested by Wright and Poynton, who first exploited this method of feeding. Into each of two test tubes containing equal quantities of milk (to one of which sodium citrate has been added) drop a given quantity of liquid rennet and dilute HCl. In both milks coagulation occurs; with this difference, that the citrated milk clots less promptly and the resultant curd is softer, less dense, more nearly resembling the curd of breast milk.

DR. ALLIN'S EXPERIMENTS.

My assistant, Dr. F. W. Allin, as the result of more than a hundred careful comparisons, has obtained the following results:

Materials Used.—Ordinary dairy milk was used in these experiments. Wyeth's liquid rennet was used for curdling agent, which was always added last. A 1 per cent. hydrochloric acid solution and 4 per cent. sodium citrate solution was used. Two drops of HCl in 5 c.c. milk equals .025 per cent. Five drops of sodium citrate solution equals .25 per cent. One grain of sodium citrate to the ounce of milk would be .20 per cent. The gruels were standardized to one ounce of flour or oatmeal to the quart of water and cooked three hours in a double boiler.

Conditions.—The experiments were all performed at 40 C. in glass test tubes. The milk was used as whole

milk or diluted with water, flour gruel or oatmeal gruel. The dilutions made were two-thirds, one-half, one-third, one-fourth, one-eighth milk.

Results.—All experiments were repeated many times. The accompanying summary is a tabulation of results. The time recorded is the average of the results.

CONCLUSIONS

1. Sodium citrate in .25 per cent. or more retards, and very high percentages will inhibit coagulation.
2. The presence of HCl hastens coagulation.
3. Diluting milk generally retards coagulation.
4. Gruels appear to have little or no effect in retarding coagulation more than water when the citrate is used.
5. The coagula of citrated milk are softer, smoother and more jelly-like or more flocculent than those of milk not thus treated.

EXPERIMENTS WITH CITRATED MILK.

WHOLE MILK.

Milk. c.c.	Liquid Rennet. m.	HCl. 1% m.	Sod. Cit. m.	Time. min.	Curd.
5	5	2	0	3	Solid, firm.
5	5	2	5	9	Solid, soft.
5	5	0	0	5	Solid, firm.
5	5	0	5	15	Solid, soft.
5	5	2	1	4	Solid, firm.
5	5	2	2	4½	Solid, firm.
5	5	2	3	5½	Solid, firm.
5	5	2	4	7	Solid, softer.
5	5	2	10	12	Flocculi, no curd.
5	5	10	0	1	Solid, hard.
5	0	20	0	. . . . .	No curd.
5	0	20	5	. . . . .	No curd.
		HCl. 5%			
5	0	1	0	1 hr.	0
5	0	2	0	"	0
5	0	3	0	"	0
5	0	4	0	"	0
5	0	5	0	15	Small flocculi.
5	0	10	0	15	Few flocculi.

DILUTED MILK.

Milk.	Liquid Rennet.	HCl. 1%	Sod. Cit.	Diluent.	Time.	Curd.
⅔	5	2	0	Water.	3	Solid, firm.
⅔	5	2	5	Water.	5	solid.
⅔	5	2	0	Gruel.	3	Solid, firm.
⅔	5	2	5	Gruel.	20	No change.
½	5	2	0	Water.	3	Solid or coarse granular.
½	5	2	5	Water.	7	Solid.
½	5	2	0	Gruel.	3	Solid, firm.
½	5	2	5	Gruel.	20	No change.
½	5	2	2½ c.c.	. . . .	0	No change.
½	5	0	0	Water.	12	Soft, solid.
⅓	5	1	0	Water.	5	Granular.
⅓	5	2	0	Water.	5	Hard, granular.
⅓	5	2	5	Water.	5	No change.
¼	5	2	0	Gruel.	4	Granular or solid.
¼	5	2	5	Gruel.	0	No change.
⅛	5	2	0	Water.	6	Small solid.
⅛	5	2	5	Water.	0	No change.

The simplicity of this method commends it, especially in dispensary and out-patient practice where the mother's demand for "medicine" for the baby's dyspepsia may be met by the standard solution of sodium citrate to be administered in teaspoonful dose in each bottle of the feeding mixture. In private practice it furnishes another rational method of infant feeding.

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The province of the doctor is to relieve the sick and suffering and to subordinate to that first object of his calling the obtaining of a financial reward for his labor. "Do your duty and then collect your money" is the physician's motto. "Be sure of your money before you deliver the goods" is the perfectly proper motto of the business man.—John B. Roberts.

THE TREND OF PEDIATRIC OPINION CONCERNING THE ARTIFICIAL FEEDING OF INFANTS.*

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The artificial feeding of infants elicits to-day from our profession an even keener interest than at any time in the past. As a practical science it is making continual progress. A satisfactory working hypothesis having been established some years ago, the spirit of inquiry is now engaged in proving this structure and examining the principles on which it rests. Those portions which do not stand the test are being rapidly replaced by sounder material. Our labor in this direction is far from completed, but it may not be amiss at this time to review somewhat briefly the trend of pediatric opinion concerning certain of these important questions and to recount some of the recent advances.

Foremost among these, because the most fundamental, has been the recognition forced on us by the study of the comparative anatomy and physiology of mammalian species, that milk must be the basis of an infant's food, because milk proteid is alone capable of forming, with the secretions of the stomach, the soft solids requisite to such development of that organ as to fit the infant later for subsistence on the mixed diet of the adult. Cow's milk is the only milk at present obtainable commercially in sufficient quantities to meet the needs of the really appalling number of infants who for valid or in-valid reasons are deprived of their normal food from the maternal breast. Some of our chief problems of infant feeding have centered, therefore, about our efforts to adapt this milk of a foreign species to the infant's digestion. The inherent differences in the caseins of cow's milk and human milk and the size and character of their curds formed in the infant's stomach enhance the difficulties. Practically all methods of preparing milk for the infant which are of real value, including some of proprietary origin, have the common purpose of enabling the infant to digest successfully the casein of cow's milk in sufficient quantities to thrive. Viewed in this light, the claims of the advocates of different methods of feeding are reconciled, since they are but seeking by different routes the same goal.

STARCHES.

Discussion concerning the ability of the young infant to digest starches is giving way to a realization that the utility of cereal decoctions as diluents does not depend so much on whether the starch itself can be digested as on the mechanical subdivision of the casein curd and the absorption of the vegetable proteids which such cereals contain. If the starch itself causes any difficulty or such difficulty be feared, it can be readily transformed into soluble carbohydrates by previous dextrinization. A gruel which has been so dextrinized is no longer a solution of starch, but a mixture of soluble sugars with gums and vegetable proteids. However, what is commonly called starchy indigestion and starchy non-digestion are two very different things. The former, indigestion caused by starchy foods, is deleterious when it occurs, but the non-digestion and non-absorption of starch granules is often more or less present even in adults

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

wherever starch forms a part of the food. The mere presence of a starch reaction in the stools does not prove that the bulk of it has not been digested. If these decoctions of starch-bearing substances serve the primary purpose for which they are added to an infant's milk, the presence of undigested starch granules need not necessarily be more hurtful than that of cellulose and other undigested or unabsorbed residues.

USE OF BARLEY WATER.

Barley water, which is more commonly employed to make the curds of cow's milk smaller and more permeable by the digestive secretions, probably accomplishes this by its viscidity, which is partly due to its peculiar proteids. The addition of these vegetable proteids to the food may at times be no negligible quantity in determining the nutrition of the infant. This is not to be construed as advocating the feeding of infants entirely or even largely on cereals. While certainly not suited for indiscriminate use in all cases, the employment of cereal diluents for many children who have shown special difficulty in digesting the casein of cow's milk is now quite common in the hospitals of which I have knowledge. Barley water and barley gruel are much too elastic terms. Unless these are to be dextrinized the quantity of flour for young infants should not exceed one full teaspoon to each pint of water. The value of stronger cereal additions to the milk during the later months of the first year is now scarcely disputed.

CASEIN.

A new interest has been awakened in certain phases of feeding through a better interpretation of the behavior of casein in the infant's stomach and of the purposes and results of adding various alkalies to the food. Applying to these problems the most recent investigations, we have ceased to add alkalies on general but vague or unknown principles. Stated as simply as possible, these methods have resolved themselves as follows:

Casein readily combines with either alkalies or acids, and in doing so forms substances which have different chemical and digestive properties. Casein as it is found in cow's milk fresh from the udder is now called calcium casein, because the casein is chemically combined with calcium or lime. It would simplify matters if the term bicaseinate of calcium were applied to this casein of fresh cow's milk, for on adding limewater to such milk the casein takes up still more lime from the limewater and forms a new compound, which might be called caseinate of calcium. The difference between these compounds of casein and calcium in fresh milk, and in milk to which limewater has been added to the point of alkalinity with phenolphthalein, is as distinct as the difference between bicarbonate of soda (baking soda) and carbonate of soda (washing soda). Good fresh cow's milk requires the addition of from 60 to 80 per cent. of its bulk of limewater to make it alkaline to phenolphthalein and to change all the normal bicaseinate of calcium into this new compound, which is not coagulated by rennet.

When we add from 5 to 10 per cent. of limewater, as is customary in infant feeding, to a mixture containing but a small amount of actual milk, the casein will be wholly or almost wholly changed into the form which can not be coagulated by the rennet ferment of the infant's stomach until the secretion of acid has removed the extra calcium; but when the same percentages of limewater continue to be used, as the mixture is strengthened by additional quantities of milk, there begins to be present in the food more of the coagulated casein than the limewater is able to saturate. So that when we add from 5 to 10 per cent. of limewater to the weak milk mixtures suitable for a newborn infant we first give milk which is not curded, and later by gradually strengthening the food without raising the quantity or percentages of the lime water we supply increasing amounts of casein which will form a curd in the stomach.

OTHER ALKALIES.

Other alkalies added to fresh cow's milk will also form combinations with the casein and alter its digestive properties. Such are sodium carbonate, potassium carbonate, magnesium hydroxid, sodium bicarbonate and sodium citrate. The first three of these probably form caseinates of calcium and sodium, of calcium and potassium and of calcium and magnesium. Sodium carbonate and potassium carbonate are usually added in such quantity as to just about completely saturate the casein and prevent its curdling. But when we use bicarbonate of sodium we often add it in such quantity as not only to saturate the casein, but its unused portion remains in the food and acts as an antacid in the stomach. It not only modifies the digestive properties of the casein like the others, but its antacid properties which are not fully neutralized by the milk may be used to modify any natural or abnormal acidity of the stomach. It is especially in vomiting cases where the stomach is too acid from the production of abnormal acids that bicarbonate of sodium finds one of its best fields, although I believe that at times the more soluble compound with sodium is more readily absorbed than that formed with limewater.

The inhibition of the coagulating power of rennet on such casein as is saturated by the addition of these alkalies is, however, but temporary, for on the addition of an acid like gastric juice, in quantity sufficient to neutralize and remove the extra alkali, the normal properties of coagulation by rennet are restored.

On the contrary, when citrate of sodium is added to milk a very different chemical change takes place from that which accompanies the employment of the usual alkalies, for with citrate of sodium the casein is decalcified and a sodium casein is produced, which rennet can not thereafter affect, so that acid must form with it only the type of curd which acid would form with it outside of the body. My experience with the employment of from 1 to 2 grains of citrate of sodium to each ounce of actual milk in the feeding, as recommended by Poynton, has been sufficiently favorable to warrant the belief that it is worthy of a more extended trial in selected cases than it has yet apparently received in this country.

EFFECTS OF ACIDS ON MILK.

I can only refer here to the further effects of acids on fresh milk or alkalinized milk in freeing the casein entirely from its combination with alkaline bases and as a second step forming acid compounds with the freed casein. Such are the curds formed when natural souring takes place, or when acid is added, of free casein, casein lactate and casein hydrochlorid. When rennet acts on the milk either before or conjointly with the acid, producing calcium paracasein (junket), the acid transforms this first into free paracasein and then into paracasein lactate or paracasein hydrochlorid.

PERISTALSIS AND INTESTINAL DIGESTION.

The exceedingly valuable experiments of Prof. W. B. Cannon, of Harvard, have reconstructed our views on intestinal processes. Many of us were taught that peristalsis consisted in successive waves of contraction of the

circular muscular fibers of the intestine, which advanced the food mass, aided by shortening of the longitudinal fibers. Professor Cannon, by watching through the x-ray screen the movement of food masses containing bismuth, has shown that circular contractions occurring simultaneously at short distances in the small intestine cause a segmentation of the food mass. These contractions then relax and are followed by other contractions midway between the former, dividing the masses at new points, but causing them to reunite at the previous points of segmentation, and this is repeated until finally the masses are swept by a peristaltic wave further along in the bowel.

These observations throw new light on the mechanics of intestinal digestion and the method by which the chyme is churned and mixed with the digestive secretions in the intestine. We are all doubtless familiar with certain stools of infants which present the fecal mass divided into what I have elsewhere designated as flakes about the size of a flattened oat. These, while ordinarily termed curds, are often small masses of perfectly digested fecal matter. They are most typical in the stools of very young infants, securing only small amounts of milk from the breast, where a small fecal residue is accompanied by considerable quantities of mucoid secretion. For their formation I have heretofore been unable to secure a satisfactory explanation. In the light of Professor Cannon's work, it is readily explicable that these flakes are formed by segmentation in the small intestine, but the fecal residue being small and the intestinal secretion relatively large they are eventually surrounded by the latter so that subsequent fusion into larger masses is prevented.

Again, no better explanation could be offered us of the injurious influence on intestinal digestion of flatulent distension of the bowel. It is almost inconceivable that a much distended small intestine should be capable of producing a normal segmentation of the chyme or of bringing the food masses into repeated contact with the entire area of secreting surface. While improper digestion of the food leads to the formation of the gas which distends the bowel, this is but another instance of a vicious circle which must be broken before proper intestinal digestion can be resumed.

PERCENTAGE FEEDING.

Now that the furore which followed the introduction of the American system of percentage feeding and milk modification has subsided sufficiently to allow us to estimate calmly its value, certain conclusions are forced on us. The first of these is that in scope and elasticity it far surpasses all previous efforts at artificial feeding because it enables us, as never before, to control intelligently and with approximate accuracy the constituent elements of the food for each individual infant. On the other hand, it is no detraction whatever from the merited laurels of those who have devised, developed and popularized this system, to say that we should now realize that no method of artificial feeding can ever safely or properly replace the physiologically adapted milk of the human breast among the great mass of our population. Artificial feeding is unquestionably attended with more danger than breast feeding. The two alternatives should not be offered lightly to the prospective mother as though they were of equal value. While bad breast milk, if it be really bad, is worse than good artificial feeding, the nervously and socially overwrought mother does not make up the vast bulk of the motherhood of our country. Breast milk which is good and plentiful, or which can be made so with a little rational attention, far surpasses as a food that which is furnished by the cow and is infinitely beyond the combinations of the manufacturing chemist.

INFANT FOODS.

Whether the harm done by infant foods which claim to equal mothers' milk has been in any degree offset by the wide dissemination of their often faulty directions for infant feeding might perhaps be debatable. Parents who employ these on their own responsibility and physicians who recommend them should inform themselves, however, concerning their composition and understand that infant foods are but rarely safe or of value for any considerable period by themselves; that they are subtle and prolific causes of rickets, scurvy and malnutrition, and that many, nay most of them, are really successful only when combined with fresh cow's milk and its indispensable proteids, to which the child so fed owes its proper development, although the food manufacturers claim the credit.

CLEAN MILK.

The reason why cow's milk is the best commercial substitute when we are forced to resort to artificial feeding has already been stated. To be suitable for this purpose it must be fresh and pure. The movement for a clean milk supply which had its origin with Dr. Coit, in Newark, N. J., is yearly gaining headway over the country and must be accorded a place among the great life-saving measures of recent years. We have not yet reached such perfection that pasteurization or some modified form of sterilization is not usually necessary during the warm months of the year unless the circumstances be exceptional.

One of the objections most commonly raised to the introduction of modified milk feeding among the poorer classes has been that it would be impossible to teach the mothers properly to prepare the food. My personal experience has amply disproved this. If the physician himself thoroughly understands the steps to be taken and is willing to take the time not only to write out his directions, but to explain them fully, excellent results may be obtained. But this is not enough; he must later make the mother tell him in her own words what she is doing, for by this method only are serious errors and omissions corrected. With time and patience most mothers may be taught to prepare food suitable for their infants, using inexpensive instruments of precision. But they must also learn that such feeding requires supervision and change with the growth or temporary indisposition of the child. It is to ignorance of this fact, or to the inability on the part of the physician to maintain control, that artificial feeding owes its greatest dangers.

As a rational outgrowth of the movement to secure clean milk has come the conviction that the less milk and cream are manipulated the better they are digested by infants and consequently that the use of top milks of easily varied richness in fat is preferable to cream and milk mixtures. The fat content of food prepared from top milk can be more easily controlled. Possibly the only exception to these statements is where both the requisite purity and exactness of dispensing can be obtained through milk laboratories.

THE AMOUNT OF FAT.

Evidences of proteid indigestion are more readily comprehended than those of too high fat. For a not uncommon type of such stools Dr. Holt's simile of

scrambled egg is an excellent one which I have had frequent occasion to verify. The recognition should be more general of the fact that high fat is capable of causing constipation as well as a fat percentage which is too low, and also of the futility and probable danger of pushing the fat much beyond 4 per cent. for any child. This, then, constitutes one of the risks in the use of cream and milk mixtures, owing to the wide inaccuracies which may result from the variableness of all centrifugal creams, and the absolute impossibility of making any close estimate of the fat content of such creams without the use of the Babcock machine. Even commercial creams from the same source vary daily very considerably. I have in mind a recent instance in which the child's food had been made with cream and milk in the country, but on return to the city a cream was secured marked "special." This I found to contain 40 per cent. of fat. The previous formula made up with this actually contained 11 per cent. of fat, and only a fortunate habit of inquiring into details prevented the serious disturbance which inevitably would have followed. In other instances the persistent refusal of the child to take a suitable quantity from its bottles, or the otherwise unexplained presence of mucus in the stools, has led to similar discoveries.

FEEDING FORMULÆ.

Methods of obtaining milk formulæ and rules for the preparation of such food are now accessible in several standard text-books. Those, however, who are satisfied with securing a few stock formulæ will seldom attain to genuine success in infant feeding, for this includes the reclaiming of the marasmic as well as the conduction of the normal infant. Those who have no clear conception of the purposes subserved by the various component parts of the food nor of the indications for varying these have no clue to the solution of difficulties as they arise, and readily fall victims to the seductive claims of the patented foods in the hope that in some mysterious way they may be helped out of their troubles.

EXPLANATION OF DIFFICULTIES.

Many of the difficulties experienced arise, I believe, from the non-comprehension and non-application of certain broad principles. Surely, enough has been said recently by many writers concerning the necessity of feeding infants as individuals, but the distinction between the fairly normal infant and the sick child, which includes the child hitherto fed on condensed milk or various commercial foods, as well as the child with disturbed digestion or nutrition from any cause, is not sufficiently understood. The usual schedules for feeding at different ages may apply to the fairly normal child whose digestive powers have been developed, more especially when such feeding was begun at birth; but to endeavor to make an infant with disturbed or untrained digestion take the amount of casein in the food usually scheduled for its age is folly. Trial must first be made with much lower formulæ, and particular attention given to determining whether the difficulty lies with the digestion of the fats or of the proteids. The stools, the weight chart, and the behavior of the infant are the triad with which successful feeding must be conducted. In my wards of the Nursery and Child's Hospital the stool of each feeding case is brought to the cribside in a basin to be studied in conjunction with the range of the weight chart, inspection of the infant, and the nurse's report before changes are made in the food. Such changes must not be made too frequently and allowance should be made for minor variations of both weight and stools. In the case of an infant with bad stools the restoration of digestion as evidenced by better stools and greater comfort is infinitely more important than an immediate gain in weight. It is, in fact, a prerequisite to such gain. It is now rather generally accepted that fairly normal young infants whose artificial feeding is begun soon after birth will, while they are being trained to digest their new form of casein, usually take a rather high proportion of fat to proteids (3 to 1), since the fat supplies an easily absorbed source of heat and energy. Not all, however, will tolerate so high a proportion. When proteid digestion has been established, the proteid percentage should be pushed up somewhat more rapidly than was formerly deemed advisable, in order that there may be furnished adequate proteid for proper nutrition.

On the other hand, I think there is an increasing tendency in the sick wards of infants' hospitals to employ level fat and proteids (i. e., formulæ made from plain milk). These are better borne by sick children who have fever and are also better assimilated in malnutrition cases in which the infants have suffered from varied attempts at feeding. Fat starvation does not occur with these level mixtures as it does with almost fat-free infant foods or condensed milk which is relatively poorer in fat than good average fresh milk. There is a considerable number of such infants who can not take the high fat ratios of the common formulæ, although after good growth has been established on level formulæ cautious attempts may be made to raise the fat ratio a little higher.

Somewhat more advanced infants with fairly good digestions take the usual schedule proportions of fat and proteids (2 to 1) well, but much of what might be called subnutrition may be avoided after the sixth or seventh month by pushing the proteids somewhat above 2 per cent., a percentage which until recently has been considered a fair one at this period. The lack of formulæ between 4.7.2 and pure milk 4.4.4, except for such as could be made by the partial dilution of the milk, has been noticeable in some hospitals and milk dispensaries.

Finally, too much emphasis can not be given to the statement that the most carefully planned percentages are often fruitless because of overfeeding or improper intervals. Far less difficulty would be experienced in the feeding of infants if closer attention were given to the well-established rules governing the proper intervals and the quantity. No rules are so frequently violated even in hospital practice. It is especially noticeable in the tendency to overfeed undersized infants. Many poorly nourished infants are fed at intervals which correspond to their weight or apparent age. At the same time, despite or perhaps owing to their failure to gain, the quantity is repeatedly increased to equal or even to exceed that of a normal infant until the stomach can neither contract properly on its contents nor secrete sufficiently for their digestion. Energy and material which should be used for growth are thus expended on this undue labor of digestion, if indeed there can be any proper absorption from the partially digested mass. By giving at longer intervals and in smaller quantities (which may be made more concentrated as the stomach regains its tone) excellent results are produced in these cases.

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WHOLE MILK VERSUS LABORATORY MILK.*

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Whatever opinion is entertained as to the intrinsic value and practical utility of cows' milk modified by the percentage method, as practiced in special laboratories, there is unanimity in pronouncing the plan the best yet advanced for securing constancy in the constituents of a substitute infant food. It admits of accuracy to a small fraction as no other known method does. It renders possible, from day to day, feedings practically invariable as to their proteids, fat and sugar.

In short, the laboratory product is an ideal substitute for mother's milk, theoretically. But if the accumulated experience in infant feeding has established one thing beyond another it is that we are not up against a theory but against a condition—a condition as stubborn as any met in the practice of medicine.

This condition is unnatural, morbid and confusingly variable. Infants are born anatomically and physiologically built for the warm mother breast and virile mother milk. Any other method and product in the dining-room appointments of this new arrival must be classed as abnormal. He may or may not take the imposition kindly. Frequently his whole being is thrown into a state of revolt and ordinary conciliatory measures may prove of no avail.

Physicians are generally consulted only in cases demanding extraordinary measures. A large proportion of these are already complicated by more or less functional, if not, indeed, organic, disease. No fast rules for feeding can be laid down, because no two cases are quite alike. Every infant deprived of its normal nutriment is distinctly a law unto itself.

As in applied therapeutics, so in infant feeding, the very multitude of plans and products that have been indorsed in the past is indicative of great problems yet unsolved. Ten years ago we sought an easy solution of the entire question in sterilization. Later we took up laboratory milk. The present plea is for a return to raw cow's milk.

In the subject of this paper the term laboratory milk is made to include every form of milk other than fresh raw cow's milk or fresh cow's milk diluted and warmed to about 100 F.

Clinically, milk modified by the percentage method has proved applicable only for temporary use in certain cases to bridge an emergency. For general use or for prolonged feeding in any one case the results have disappointed its most sanguine advocates. Economically its utility is even more restricted. The cost of such milk, the lack of proximity to a laboratory and the necessity for change of the prescription from time to time place the product within the reach of only a favored few among the wealthy.

Sterilized and pasteurized milk are now practically within the reach of every family, but no physician of large experience recommends either, especially not the former, for continuous feeding. They are employed now only for one of two reasons. When the milk supply is not above suspicion in freshness and purity, or has been condemned, recourse must be had to one of the above methods until a proper milk can be secured.

Again, in the event of serious disturbances in the alimentary canal it is the part of prudence to allow only sterilized milk while such disturbances are being removed. But this practice is now recognized as only offering to the belabored digestive organs a product more difficult of digestion. A better procedure is to allow only sterile drinks or thin gruel while the digestive tract is being cleared and then resume feeding with largely diluted milk. On the same principle and for the same reasons peptonized or partially digested milk is advantageously employed.

A synthetic breast milk is still to be found. Our nearest approach to it is laboratory milk viewed merely from the point of its chemical composition. From every point it is far from a duplicate of mother's milk. The natural milk emulsion has been destroyed in the process of centrifugalizing. The life-quickening principle which distinguishes milk from every other liquid food has been destroyed by heat. The product is a mixture of dead milk constituents.

The wire in your scrap pile may be an exact duplicate of that stretching overhead, but it is only a mass of inert metal, while that overhead is described as live. In much the same sense milk that once had the sanction of eminent authority is now recognized as scrap-pile goods. The life-quickening principle is not in it. It is dead. Fresh milk is not a dead liquid. Like the vital fluid tissue, the blood, of which it is an immediate product quite as much as nerve tissue, fresh milk is much alive.

FRESH COW'S MILK IDEAL SUBSTITUTE FOOD.

The ideal, natural, practical and economical substitute food for infants is fresh cow's milk. Drawn and handled with such care as to cleanliness and health as is required by laboratory standards, cooled at once and then kept at a temperature below 50 F., cow's milk possesses all the important vital constituents. It is a live fluid. These constituents give to milk the characteristics described as freshness or sweetness, and which are not found in stale, sterilized or laboratory milk.

Freudenreich ascertained that this freshness has a distinct germicidal power, typhoid and cholera bacilli being destroyed by fresh raw milk. This power he found absent in milk which was well kept, yet four or five days old, and in milk which had been heated to a temperature exceeding 130 F. Too little attention has been directed to securing the benefits of this native virility in cow's milk. We need as large a proportion of it as can possibly be secured to the infant. In country practice infants have the advantage of these benefits. The greater difficulties of infant feeding in city practice are at least in a measure due to the absence of these benefits. The difficulty is further heightened by the addition of deleterious qualities to milk through careless, dilatory and otherwise unscientific handling.

Each year makes the successful feeding of city infants with cow's milk a less difficult problem. Much is to be gained by persistent agitation. The laity can have a milk supply 100 per cent. better than now provided by simply demanding it. The first cost need not be materially increased. With our constantly improving railroad facilities, due to the popular clamor for rapid transit, the question of greatly improved milk transportation is no longer difficult.

Much has been accomplished along educational lines by our bacteriologic and milk laboratories. Methods by which cow's milk may be kept fresh and not only safe but superior without the addition of a preservative are not unknown to the average dairyman. He will employ these methods when the consumer demands it. There is

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

no doubt that at the present time inferior milk is marketed by pasteurizing it. The term is high-sounding and with some is synonymous with excellence. The laity need to learn that good milk properly handled not only does not require sterilization, but is positively made less valuable from the dietetic point of view by such process. Milk so treated is not freed from the products of bacterial growth. It is not absolutely sterile, and even if it were would require careful handling to guard against subsequent infection and multiplication of bacteria.

The subject of federal control of the system of milk production and distribution is receiving increasing attention. But, as in all matters closely related to the public health, education will do more good than legislation. Reynolds, of Chicago, has made a strong plea for twelve-hour milk. He pointed out that such milk is worth more for infant feeding than milk twenty-four hours old, while milk thirty-six hours old is not only of little food value, but positively harmful to young and delicate children.

The milk bottle is popular, but at the present time is too frequently looked on as a positive guarantee of freshness and purity. With all its advantages the bottle is the source of much mischief and positive harm. Much of our city milk is bottled at the milk depot, and not a little in the milk wagon on the streets. Milk bottled at the dairy permits of great leisure in transportation, and much of the milk when it reaches the consumer is in a state of semi-decomposition. Public sentiment needs an awakening along this line.

Most of the milk consumed in Camden comes from Salem and Burlington counties, New Jersey. The best quality is "certified milk" and gives general satisfaction in the feeding of infants.

580 Federal Street.

DISCUSSION

ON PAPERS OF DRS. COTTON, SOUTHWORTH AND MCALLISTER.

Dr. D. E. English, Millburn, N. J., said he realized that bringing up a child in the country is a very different thing from keeping a child from dying amid the horrors of a great city. The working woman's baby in the country sits on the kitchen floor and uses his crust of bread or bone to wipe up the floor or scratch the dog's back, and then puts it into his mouth and does not get sick. Why? Simply because the mother has not time to bother with him. He is not taken up and fed until his stomach is entirely empty and he is really hungry. Then he is fed until his stomach will not hold any more, put into a clothes-basket and set out of doors under a tree, where he sleeps for three hours or more. It is an hour, or perhaps two hours, longer before he is again fed. This means that the baby's stomach has been distended with food, and that it has had time for digestion, evacuation, contraction and rest before the next feeding. This is the true idea of infant feeding. A baby's digestive organs can not always digest the same amount of the same kind of food in the same number of minutes. Again, a baby will not be healthy and happy unless he earns his living, any more than will an adult. A baby earns his living by the cool bath, the air bath, by exercising his limbs, by crying, and by being exposed to cool, fresh air.

Dr. John Lovett Morse, Boston, said that, in feeding babies, when breast milk can not be secured the idea is to give a food suitable to the baby's digestion. It is an advantage to know what one is working with and not to work with unknown quantities. This knowledge does not prevent trying all kinds of infant feeding, nor the use of good common sense. He believed with Dr. Southworth that milk can be modified at home, not only by the rich but by the poor. The only question is whether it will be modified correctly. He did not agree with Dr. Southworth in preferring top milk to milk and cream. His experience and that of many men accustomed to the use of modified milk did not agree with Dr. McAlister's statement. If the milk is pure and fresh and can be kept so, it is better not to pasteurize, as pasteurizaiton undoubtedly makes milk somewhat less digestible. Under other conditions, however, it is wiser to pasteurize in order to avoid the evils which result from bacterial contamination. He failed to see why it is necessary, in discussing infant feeding, to bring out the fact that some babies will do well on a bad food. Everyone knows that. Because a given baby happens to be able to live on a bad food, there is no reason that it should be given, nor should this fact be used as an argument for giving bad food to other babies. The aim should be to give the proper food.

Dr. C. G. Kerley, New York City, said that in infant feeding there should be as little manipulation of the milk as possible. He has used different chemicals in an endeavor to influence the digestibility of the proteid, and a few years ago he made a thorough study as to effects of alkaloids and antacids on coagulation, and he believed that the less milk is manipulated and the fewer chemicals employed, the better. There may, of course, be specific cases in which their use is necessary. It should be remembered that feeding the infant is something other than the addition of alkaline or an arrangement of percentages of the nutritional elements. The food is put into an infant's stomach in order to nourish a difficult feeding patient, who must be treated as well as we treat the food. The general hygienic management of the baby is most important and determines to a great extent its ability to overcome various digestive disorders.

Dr. R. B. Gilbert, Louisville, Ky., said that the extent to which bacterial flora get into the milk is well known, and no matter what the percentage of proteid may be, these bacteria are apt to occur. The presence of colostrum in milk is also an important matter, for the milk of one pregnant cow in a herd of twenty will so infect that milk that it will be injurious to the baby. He has demonstrated that the pancreas is fairly well developed in babies and has wondered that we have been taught that the pancreas does not secrete anything in early life. It is as well developed as any part of the intestinal apparatus. He thought that Dr. Cotton's suggestions relative to sodium citrate would help to solve many difficulties in milk modification.

Dr. T. W. Kilmer, New York City, said that the baby should be supplied with that which it has a right to demand, breast milk, and the physician ought to know what breast milk contains. The average general practitioner does not have this knowledge; therefore, he is unable to feed babies successfully. He should know how much fat, proteid and sugar he is giving the baby.

Dr. A. H. Wentworth, Boston, said that apparently it is desirable for the infant to take as much proteids as it can get. So far as he knows, all the evidence is otherwise. Chittenden and other authorities seem to show that the excess above a certain amount only throws more work on the various organs and serves no helpful purpose. Men who have done most for infant feeding in Germany are unanimous in the opinion that babies need very little beyond one per cent. of proteids in their infancy, that they get sufficient quantity in that amount to nourish them perfectly. In regard to distending the stomach, he thinks that overdistension of the muscles is deleterious.

Dr. Effa Davis, Chicago, mentioned a series of five cases in which the children were all doing well on the ordinary milk mixture, but when they were put on the sodium citrate modification all remained stationary in weight for six weeks and then began to lose, notwithstanding the fact that they were taking two and three times as much milk as usual. When they were taken off the treatment it took them all ten days to regain their normal equilibrium. All are now on the ordinary modification of milk and gaining. It is clear, therefore, that all babies do not do well on the sodium citrate feeding.

Dr. J. W. Vanderslice, Chicago, said that sodium citrate solution has been used in a large number of cases for three years by men who have a very wide clinical experience. Sodium citrate advocates say that they use the simple method, believing the method to be more simple than the modified

milk. They claim that they add a natural product to the milk which brings it more nearly to the nature of mother's milk. He thought no one could deny that the addition of sodium citrate to cow's milk renders a finer curd, whether that be done in the intestine or in the baby's stomach. In giving this mixture he does not begin with the small percentages of milk, but the child is put on equal parts of milk and water and one grain of sodium citrate to the ounce of milk. If with this amount the curds persist, he adds more citrate to the milk. He has never given higher than 2 grains to the ounce, and in no case has it ever been necessary to persist in the use of more than one grain to the ounce of milk for more than ten days. As rapidly as possible the percentage of milk is increased, whether the child be one day or one year of age. A new-born baby, necessarily fed artificially from birth, is capable at the end of two weeks of taking whole milk and digesting it.

In regard to the objection mentioned of using the sodium citrate as a medicine, the plan seems to commend itself especially when a Polish woman comes to the dispensary with, perhaps, her little girl as the sole interpreter who receives the entire directions of the modification of the milk. They are directed to use equal parts of milk and water and add a teaspoonful of the "medicine" to the mixture. Most of them are capable of doing that. It thus simplifies and aids the administration in dispensary work, which is one of the greatest benefits in the use of the method.

DR. SAMUEL AMBERG, Baltimore, said that artificial feeding is based on the average analysis of the human milk and that there has been a certain amount of success in obtaining mixtures which in their outward demeanor approach human milk. The human milk, however, can not be perfectly equaled. He called attention to a few points which seem to contain the keynote of the scientific basis of feeding. He mentioned the researches of Fischer and his workers, who point out that to know the difference between the proteids it is essential to know the difference between their decomposition products. Then there were the interesting experiments of a German investigator who fed himself on gelatin. It is known that gelatin is a proteid which contains very little tryptophane, tyrosin and cystin. While he fed himself on the gelatin he could not sustain his nitrogen equilibrium; when he supplied tryptophane, tyrosin and cystin, this difficulty was not only overcome, but he even obtained a nitrogen retention. Dr. Amberg thinks that in the light of modern research these points are the most important to be considered. The only differences in this regard we know so far between human and cow's casein are that human casein contains more sulphur than cow's casein and that human casein gives a very much stronger Molisch reaction. This reaction is generally supposed to indicate the presence of a carbohydrate group in the proteid molecule.

DR. GODFREY R. PISEK, New York City, said that if sodium citrate is used it should only be employed temporarily. Persistence with it in the feeding of children throughout the first six or nine months will impair the motor function of the stomach so that they will not be ready for semi-solid food.

DR. R. B. GILBERT, Louisville, Ky., said he first noticed the presence of colostrum in the milk of nursing mothers. In one case it was found to be very abundant. In another mother who had become pregnant the colostrum immediately appeared. Shortly after this case he knew of one in which the presence of colostrum was easily detected by the microscope. It is a well-known fact that during menstruation on the part of the mother the presence of colostrum is temporary.

DR. COTTON said he was in full accord with the suggestion that sodium citrate be used temporarily. It should be discontinued as early as the good digestion of a high percentage of milk is accomplished, this to be determined by the ordinary clinical evidence of growth in strength and weight and by the lack of evidence of indigestion in the stools. He also agreed with Dr. Kerley in thinking that there should be little manipulation of the milk. He thought that the discussion in regard to the bacterial content of milk did not quite fit in, because they were discussing pure milk, not bacterial milk, and no successful modification of impure milk is possible. Concerning Dr. Wentworth's remarks on the overworked metabolic processes Dr. Cotton said that so far as he knew there had not been enough experience of this pushing of the proteids under the effects of sodium citrate to determine this.

DR. SOUTHWORTH agreed that for the ordinary case milk should be as little manipulated as possible, but if enough casein can not be given in the ordinary form for the child to thrive on, something may be added to the milk which will change the form of the casein so as to be more readily absorbed in larger amounts. All these additions to milk should be used in selected cases and with a knowledge of what they are used for. Because a large amount of proteids can be borne with the addition of sodium citrate is no reason that the use of percentage feeding should be abandoned or that ridiculously large amounts should be given to young infants. No one had stated in the discussion, he said, exactly what sodium citrate does when it is added to the milk. Its action is to decalcify the casein so that it can not subsequently form tough paracasein curds. With acids it forms a soft flocculent curd. Some one stated that milk which has been boiled is dead milk. While no one is more in favor of a pure milk supply than he, he would rather take dead milk, whether boiled or pasteurized, than milk as much alive as some milk furnished in cities, with a bacterial count up into the millions per cubic centimeter. The bacteria of milk threaten the health of a good many children, and, of course, it is not known how deleterious they are, but still they do not prevent a good many children from thriving on such milk. We should not make a fetich of any one thing, but should seek the best in every direction.

DR. KILMER said that he hardly meant that all children are either predestined to die or to get well. He knows that by careful feeding he brings some children through who perhaps were predestined to die. One speaker seemed to think that there was much divergence of views. On the contrary, every year there is really a closer coming together on the fundamental principles. The points of variance are generally the non-essentials.

DR. MCALLISTER said that he did not decry modified or laboratory milk. His plea was simply for a clean pure milk. By insisting on perfect cleanliness of milk and sterilization of implements much could be done toward the solution of this problem.

THE PREVALENCE OF INTESTINAL PARASITES IN SIAM.

PRELIMINARY REPORT.

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On coming to Siam from Manila, I brought with me as an inheritance from my study of amebiasis a desire to know something of the prevalence of that disease in my new abiding place. Accordingly my first questions were devoted to this subject. I was naturally astonished at being informed that this disease is infrequent, although I discovered that at least two Europeans in the small colony had suffered from abscess of the liver.

In order to satisfy myself more completely, I obtained permission from the minister of justice to visit the government prison at Bangkok, and, through the kindness of the attending physician of this prison, Dr. Adamsen, to make a series of examinations of the stools of prisoners. I was naturally disappointed in having access for examination only to the prisoners confined in the prison hospital, for such observations as I should be able to make would, under those circumstances, not apply to the population at large, but only to the sick element. Nevertheless I commenced at once systematic stool examinations, and the specimens were procured in the following manner: Each patient received an ounce of

epsom or rochelle salts, and the fluid fecal matter was collected in clean porcelain dishes with covers. This material was examined in a perfectly fresh condition. The series consisted of 50 patients, and the infections noted are tabulated as follows:

Total cases with intestinal parasitic infection, 18.

Amœbæ	11 cases
Uncinaria duodenalis (ova)	4 cases
Tricocephalis dispar (ova)	4 cases
Strongyloides intestinalis (ova)	3 cases
Opiscorcus sinensis (ova)	1 case
Ascaris lumbricoides (ova)	1 case
Hymenolepis nana (ova)	1 case

From the preceding figures it is evident that plural infections were present. They were as follows:

	Cases.
Amœbæ and *Strongyloides*	2
Amœbæ, *Ascaris*, *Uncinaria* and *Tricocephalus*	1
Amœbæ and *Opisthorcus*	1
Amœbæ alone	7
Total	11
Strongyloides and *Amœbæ*	2
Strongyloides alone	1
Total	3
Uncinaria and *Hymenolepis*	1
Uncinaria, *Amœbæ*, *Ascaris* and *Tricocephalus*	1
Uncinaria alone	2
Total	4
Tricocephalus, *Amœbæ*, *Ascaris* and *Uncinaria*	1
Tricocephalus alone	3
Total	4

Contrary, then, to the report I had received, amebas are not infrequently found in the stools of natives of Siam. Moreover, it can not be said that these amebas are of the non-pathogenic type, if such there be. At least three of the patients examined were suffering from a true amebic dysentery, others had more chronic or subacute intestinal symptoms.

In all 50 cases were examined, of which 18, 36 per cent., presented infections with intestinal parasites (exclusive of monads which were present in at least 60 per cent. of all the cases). Of the 18 cases of infection, 11 showed amebas, a percentage of over 61 per cent.

PERCENTAGE OF INFECTED CASES OUT OF A TOTAL OF 50.

	No.	Per ct. of infected cases.	Per ct. of total cases.
Infected cases	18	....	36
Infected with *Amœbæ*	11	61.1	22
Infected with *Uncinaria*	4	22.2	8
Infected with *Tricocephalus*	4	22.2	8
Infected with *Strongyloides*	3	16.6	6
Infected with *Opisthorcus*	1	5.5	2
Infected with *Ascaris*	1	5.5	2
Infected with *Hymenolepis*	1	5.5	2

The only conclusion that one may draw from these figures is that infection with animal parasites is widespread in Siam (the patients being from various districts and a few were Chinese), and that amebic infection is very common. It is my intention to make more complete records on this subject as time and opportunity allow.

So far as I can discover, *Opisthorcus sinensis* has not been previously reported from Siam. *Hymenolepis nana* has been reported from Siam by Rasch.[1]

1. Deutsch. med. Ztschr., 1895.

Palpation to Find Position of Fetus.—B. G. Snyder, in the *Canada Lancet*, June, 1906, in discussing the position of the fetus *in utero*, emphasizes the value of external palpation, as a convenient, simple method, which practically eliminates the danger of infection. It is of most value before labor, but the progress of labor can be judged just as accurately after a little practice by this method as by repeated vaginal examinations. Lastly, it compels a physician to study the different positions of the child and their relations to the birth canal and thus makes him a more intelligent obstetrician.

THE TREATMENT OF PURPURIC CONDITIONS AND HEMOPHILIA.*

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NEW YORK CITY.

It is not the purpose of this paper to discuss the numerous theories concerning the etiology and pathology of these interesting conditions, for the multiplicity of ideas is the best evidence of the obscurity which still surrounds them, but to outline a course of treatment which has been beneficial.

Since A. E. Wright, in 1891 and 1893[1] and in subsequent articles, advocated the use of the chlorid of calcium to hasten the coagulation of the blood, many patients with hemorrhagic tendencies have been greatly helped by it while with others it seems inert. The preparations of the adrenal gland are also of value in many cases.

Boggs,[2] in 1904, demonstrated that the lactate of calcium had the same accelerating effect on coagulation as the chlorid.

Wright[3] and Paramore,[3] in 1905, published the results of a series of experiments in which they used the lactate of calcium and the carbonate of magnesium, as well as the chlorid of calcium. They found that the coagulation time was more uniformly influenced by the lactate than by the chlorid and that the magnesium salt had a similar accelerating effect. These were merely laboratory tests, some of them made on normal individuals, others on patients with various ailments, and the drugs were not used therapeutically.

During the past few months I have treated several patients with the lactate of calcium, with results that seem worth recording.

CASE 1.—A well-known physician, aged 53, who has one of the largest general practices in New York, is a member of a hemophilic family. His grandfather and father were bleeders, as are also a sister and a son. In the patient the tendency to bleed appeared when he was ten years old. The bleeding has always been most profuse from the nose, but he has bled much from skin of the face and head and from the mucous membranes of the mouth. The nasal hemorrhages have often been prostrating and have been increasing in severity and frequency, often requiring plugging once or twice a day.

Needless to say, this patient has had the best of local treatment by specialists and, as he says, has taken barrels of calcium chlorid and the adrenalin preparations with no benefit. During the autumn of 1905, the bleeding was more profuse than ever before and the patient's large practice was a burden to him.

Blood Examination.—On December 17, the red blood cells were 3,680,000, white cells, 5,000, and the hemoglobin 70 per cent. The stained specimens showed pallor of the red cells, moderate variations in size and shape with a number of large cells. The plates were decidedly below normal as judged from a stained specimen. The differential count of the leucocytes was normal and need not be given in detail.

Treatment and Result.—At that time the patient was bleeding practically every day and very profusely. On December 21, when bleeding, fifty grains of calcium lactate, dissolved in water, were taken and in half an hour the hemorrhage ceased with no other treatment.

During the next week, that is until December 29, twenty grains of this drug were taken three times a day. There was no bleeding, but once or twice there was slight oozing from the nose, which stopped in a few seconds.

* Read before New York Academy of Medicine, May 22, 1906.
* From the Laboratory of Clinical Pathology, Cornell University Medical College.

1. British Medical Journal, Dec. 19, 1891; July 29, 1893.
2. Deutsche Archiv. für klin. Med., March 15, 1904, p. 539.
3. Lancet, Oct. 14, 1905, p. 1096.

No calcium lactate was taken from then until January 10, and, after a few days, moderately severe attacks of epistaxis began again.

On the evening of January 10 there was a profuse hemorrhage and the patient took sixty grains of the calcium lactate. The bleeding stopped almost at once.

By January 14 there had been a gain in weight of five pounds since starting the treatment, and the condition of the blood steadily improved. The experiment of stopping the lactate for several days was repeated on several occasions, always with the same result. During the last two months the patient has taken about once a week fifty grains of the lactate and has been comparatively free from bleeding. Occasionally there has been a hemorrhage of moderate severity, but always soon controlled. Previously, the putting of the head down, as in the act of lacing the shoes, would usually be followed by epistaxis, often lasting for hours. For months now, much more violent exertion than this has caused no discomfort. Examination of the blood a short time ago showed a perfectly normal condition.

The coagulation time in this patient, as measured by Wright's tubes, was never very high, being between six and seven minutes, but it is invariably lowered from a minute to a minute and a half by a full dose of the lactate. This effect is produced in an hour at the most and persists for about a week.

Probably no one would be so optimistic as to expect a cure of such a marked case of hemophilia running through four generations, but the improvement has been so marked and, to date, so constant that, compared with his previous condition, the patient is well.

This man's son, 23 years old, began to have frequent attacks of epistaxis at the age of 16. The hemorrhages have never been very profuse, but have made him quite uncomfortable, as they began without the slightest warning while he was walking along the street or at the table, etc. No records of his case have been kept, but during the past five months he has taken an occasional dose of the lactate, about forty grains once a week, and his condition has been much better than for years.

CASE 2.—J. S., male, aged 17, student, family history entirely negative.

History.—This boy began to have frequent, profuse attacks of epistaxis when five years old. These have recurred at irregular intervals to date, at times lasting for hours and causing him to faint. The gums and mucous membrane of the mouth at times ooze blood, but there has been none in the urine or stools. The severe attacks have usually been accompanied by numerous hemorrhagic areas over the legs, arms and beneath the eyes. When thirteen years old he began to have occasional rheumatic pain in the knees. This trouble has frequently recurred, usually with slight fever for a few days, and is associated with an outbreak of petechiæ on the legs. His physician, Dr. E. W. Perkins, states that practically all the time for years the boy has had well-marked purpuric eruptions somewhere on the body. The slightest bruise is invariably followed by ecchymosis. Four years ago, after having a molar tooth pulled, he bled profusely for three hours.

Examination.—When first seen, March 6, 1906, there was a moderate number of petechiæ over both legs and several larger areas on the thighs. The mucous membranes of the mouth showed several small purpuric spots and there were marks on the trunk, as from bruises.

Blood Examination: This showed: red cells, 4,680,000, white cells, 6,000, hemoglobin, 80 per cent. The coagulation time was four minutes. A stained specimen showed a normal differential count and that the blood plates were very few. Later the plates were counted and were found to be 29,000 to the cubic millimeter.

Treatment and Results.—The patient was given fifteen grains of calcium lactate three times a day for a week. At the end of this time the coagulation time was unchanged, being four minutes. The purpuric spots were much faded and no new areas had developed. A severe blow on the right knee had resulted in no ecchymosis.

The calcium lactate was stopped on March 20. On March 27 a profuse eruption appeared on the thighs and legs, associated with pains in both knees. The patient was given salicylic acid and sodium bicarbonate with fifteen grains of calcium lactate every morning. Four days later he reported that the improvement had been very rapid, much more so than from any previous attack. The purpuric eruption had nearly disappeared. He was then given Fowler's solution and iron with fifteen grains of calcium lactate, twice a week. From this time until May 14, that is, for more than six weeks, he remained free from bleeding, with the exception of an occasional spot on one or the other leg, and all the time he was playing and exercising as vigorously as other boys. He then neglected to have the prescription for the calcium lactate refilled and two days more than usual having elapsed between the doses, he was awakened on the morning of May 14 by the most severe attack of epistaxis for months. This lasted for over an hour.

The coagulation time on this date was four and one-quarter minutes and the blood plates very few.

It is interesting to note that in spite of the decided hemorrhagic tendency in this boy the coagulation time is at all times a low normal, the variations in health being between three and six minutes by Wright's tubes.

CASE 3.—A. H. G., aged 31, male, married, instructor in Latin. Family history entirely negative.

History.—The patient has never had any serious illness. When about six years old he bled profusely for hours after having a tooth pulled. Two years later frequent attacks of epistaxis began. The bleeding occurred from either nostril or from both simultaneously, and often continued for hours, requiring packing. Such attacks have recurred frequently to date and last autumn became more numerous than ever before, being only from four to seven days apart for weeks.

Any slight bruise, as even the rubbing of a dress-suit case on the legs, is always followed by ecchymotic areas. The last of December he developed a carbuncle on the upper lip. At the operation, performed in one of the large hospitals in the city, the bleeding was not extreme, but at the subsequent dressings, profuse hemorrhage occurred. He was given calcium chlorid with some benefit. A few days after leaving the hospital the epistaxis recurred.

Blood Examination.—When referred to me by Dr. D. B. Brinsmade, Jan. 23, 1906, the red blood cells were 4,372,000; white cells, 12,000, and the hemoglobin 70 per cent. A stained specimen showed marked pallor of the cells. The blood plates were very few and small in size. This point has also been noted in all subsequent specimens examined. On one occasion, when counted, they were 22,000 to the cubic millimeter. The differential count was normal. Before beginning treatment the coagulation time was eight and a quarter minutes. This promptly fell to seven minutes, where it remained.

Treatment and Result.—The patient was given twenty grains of the lactate of calcium three times a day for a week and after that forty grains twice a week. On February 5 he returned to work feeling as strong as ever and had no tendency to hemorrhage, even on blowing the nose.

On February 13 medication was stopped and not resumed for a month. Then oozing began on three occasions from the left nostril, but ceased after taking sixty grains of the calcium lactate. His condition then continued excellent.

Examination about the middle of April showed several small ecchymotic areas. There had been no bleeding from these, but thinking to prevent any future hemorrhage, they were cauterized with silver nitrate solution. In less than twenty-four hours severe epistaxis, lasting several hours, occurred from sloughing. Since then administration of calcium lactate has been continued twice a week and he has also been given iron with Fowler's solution. There has been no further hemorrhage.

CASE 4.—J. C. K., aged 44, male, single, family history excellent.

History.—For twenty-one years the patient has been advance agent for a minstrel troupe and very active. He has al-

ways been in perfect health, except that two years ago he was treated for a mild attack of lumbago. The only indication of rheumatism has been slight pain and stiffness in the left shoulder at intervals, since last December. He first came under observation on Jan. 6, 1906.

This patient showed no purpuric tendency until the middle of June, 1905, when he noticed a purplish area several inches in diameter on the left thigh, followed a few days later by a similar area on the right thigh. About August 1 numerous small spots appeared on both legs and since then successive crops come and go, so that he has never been free from them. Walking is always followed by innumerable new eruptions. At times many spots have appeared on the limbs. The slightest bruise was invariably followed by an ecchymotic area.

While riding on a train, June 24, 1905, he had a sudden, profuse hemorrhage from the right nostril and fainted away. Between then and October 1 there were five very severe attacks of epistaxis, requiring packing of both nares. After one of these the patient was in a hospital for three weeks, merely from exhaustion, and he has not been able to work since early last autumn. There had been no profuse epistaxis since October 1, but frequent oozing from the nose. Numerous hemorrhagic areas have appeared on the gums and throughout the mouth. There has never been any blood in the urine or stools.

This patient was treated in several cities, both in hospitals and by physicians in private. He states that he was given calcium chlorid, the adrenal preparations, ergot, etc., and that the nose was treated locally with numerous styptics.

Examination.—When first seen, Jan. 6, 1906, there were multitudes of petechial and ecchymotic areas in all stages of development over both legs. There were a few small spots scattered over the trunk and large areas on the arms. The lips showed several spots, the gums were discolored in places and appeared soft.

Blood Examination: On January 6, blood examination showed red cells 4,928,000, white cells, 8,000, hemoglobin, 70 per cent. The differential count was normal and the plates practically absent.

Treatment and Result.—The patient was given sixty grains of calcium lactate at once and fifteen grains three times a day for a week. Two hours after the initial dose the coagulation time was lowered from six and one-quarter to five and one-quarter minutes. As this patient lived out of the city he was seen only once a week and later once in two weeks.

After the first week's treatment there was a marked improvement, the old spots fading, a few new ones appearing. The patient stated that he had noticed a change for the better in three or four days. From that time there has been a slow but steady improvement. For experimental purposes the calcium lactate was stopped on several occasions; such action was invariably followed by numerous petechiæ. At these times also the coagulation time was lengthened, only to be lowered by the lactate.

During the last two months this patient has taken regularly thirty grains of the lactate twice a week. He has led a very active life, often walking several miles a day over rough country and through bushes, and has also rowed a boat long distances. His condition is excellent and he seems a well man.

Blood examination recently showed the red cells to be 5,280,000, white cells, 9,000, and the hemoglobin, 90 per cent. A stained specimen was normal, except that the plates were still very low. The count of the plates was 25,023 to the cubic millimeter. This being so we do not consider this man cured, but believe the purpuric tendency is kept under control. The patient thinks himself as well as ever and is going to return to work soon.

CASE 5.—H. H., male, aged 33, married.

History.—This man was very large and robust and had never had any sickness. For years he has been a steady drinker, taking three or four glasses of beer and one glass of whisky a day. He was first seen by Dr. L. L. Bradshaw, to whom I am indebted for the case, on April 8, 1906. Four months before, the patient had noticed a few reddish spots on the right ankle. These slowly extended upward to the knee and to the left leg. As there was no discomfort he did not consult a physician and continued at his work in a lumber yard. About two weeks before coming under observation he began to spit blood occasionally, from oozing of the gums, and this continued. On April 7 this was much more profuse, but he still worked all day. That evening eruption appeared over the entire body.

Examination.—When seen on April 8 there were petechial and ecchymotic areas, some larger than a palm, over the entire body, face and scalp. He was spitting blood several times a minute from the gums, and all of the mucous membranes of the mouth. Sixty grains of calcium lactate were at once given and thirty grains ordered three times a day. The next day, many of the areas had ruptured and were covered with crusts. The gums still bled freely.

Blood Examination: This showed red cells, 4,480,000, white cells, 12,000, hemoglobin, 90 per cent. The differential count was polynuclear leucocytes 79 per cent., lymphocytes, 12.3 per cent., large mononuclears, 4.3 per cent., transitional, 4 per cent., eosinophiles, 0.3 per cent. The plates were practically absent.

Urine: On the evening of this day the patient began to pass large amounts of blood in the urine. A specimen, centrifuged, showed 13 per cent. of sediment composed almost entirely of red cells. Large amounts of quite fresh blood also appeared in the stools.

Course of Disease.—The following day, April 10, there was much less blood from the mouth and the skin eruptions were fading. The urine showed 10 per cent. of blood. The anemia was increasing. The red cells showed marked variation in shape and size and a few normoblasts appeared. On April 11, the coagulation time, then taken for the first time, was eight minutes, and this was after large doses of the calcium lactate for several days. The urine showed 5 per cent. of blood. April 12, through a mistake of the nurse, sixty grains of the calcium lactate were given every three hours for six doses, but no ill effects followed. On the following day, the thirteenth, the urine was free from blood and all bleeding had ceased from the skin and mucous membranes. The red cells were now 3,168,000, white cells, 13,500, and the hemoglobin, 60 per cent. The coagulation time was six and three quarters minutes. The plates were still almost absent.

For several days during the bleeding period the temperature varied between 100 and 102 F. by mouth, and the pulse between 100 and 120. This, with the presence of a polynuclear increase, is an indication of an infection of some sort.

On April 14, Fowler's solution was begun in doses of four minims every four hours. On the next day the blood plates were fairly numerous, scattered throughout the specimen, but none occurring in clumps, as is normally seen. Many of them were large. The calcium lactate was continued, thirty grains three times a day, until April 17, when it was stopped. On April 21, the plates appeared normal in number and the improvement in the general condition was marked. The urine now showed a trace of albumin and a few hyaline casts, so the arsenic was discontinued. No further blood examination was made until April 27, when it was noted that the plates were again much reduced and a remark was made to the attending physician that more bleeding would probably occur.

On the evening of April 30 blood began to ooze from the gums. This gradually increased, reaching a maximum on May 3, when there was considerable bleeding from the gums and tongue, but not approaching in severity the original attack. There was no bleeding elsewhere. Only one dose of calcium lactate of 30 grains was given daily for the first three days, but on May 3 the dose was increased to 40 grains every three hours.

I did not see the patient until May 4, when the red cells were 4,120,000, white cells 7,000 and hemoglobin 70 per cent. The coagulation time was eight and three-quarters minutes. The plates were still nearly absent. The bleeding was much less on this day and ceased on May 5.

A blood specimen taken May 9 showed a few scattered plates. Administration of arsenic was started on this day. On May 10 the plates were much more numerous, many occurring in clumps. The next examination was on May 14, when they were perfectly normal in appearance. The calcium lactate was slowly decreased, first to 20 grains three times a day, then

twice a day and to one dose daily. The improvement has been rapid and the patient is now out of doors.

This case was one of acute hemorrhagic purpura of the most severe type. The prognosis in a large proportion of these is extremely grave.

Sahli,[4] as late as 1905, made the statement that the value of calcium chlorid in hemophilia is still awaiting judgment.

In view of the cases here reported, it seems that the calcium, or probably the magnesium salts as well, offer the best hope of relief of any therapeutic measure so far advised.

We are, of course, aware that theoretically there is some danger of causing thrombi formation, but this must be slight if we determine with each case the minimum dose necessary to make the patient comfortable. Thirty or forty grains of calcium lactate once or twice a week is usually sufficient in the chronic cases. The large doses given to the patient with acute hemorrhagic purpura is evidence of the harmlessness of the drug when such doses are necessary.

The lactate is more easily absorbed by most patients than the chlorid of calcium and the taste is much more agreeable. The chlorid is nauseating to many individuals, while the lactate is a tasteless, chalk-like powder.

All the patients were also directed to drink from one to two quarts of milk a day, and some of the improvement probably results from this, for Wright and Knapp[5] have shown that this accelerates coagulation.

Summarizing the coagulation experiments in the above cases, it is seen that in two of the five it was decidedly above normal, in two others a high normal, and in the fifth a low normal. In all cases the blood must have had a high content of calcium, so the results attained are in accord with those of Wright and Knapp,[5] who demonstrated by chemical means, in 1902, that blood which contains a small amount of calcium is not always less coagulable, and also that blood containing much lime salts is not necessarily more coagulable than usual.

It has been claimed that the continued administration of calcium chlorid is not effectual in keeping up an increased coagulability of the blood, but, on the contrary, serves to lengthen the time. Consequently, its use has been confined to stopping acute hemorrhages or to prevent hemorrhage at an operation. Whether the effect of the lactate is different in this respect or the improvement is due, in the chronic cases, to the fact that the patients have taken the minimal effective dose I can not say, but concerning the improvement there can be no doubt. In no case has the coagulation time been lengthened by the lactate.

The patient in Case 1, the physician, and the patient in Case 3, the teacher of Latin, are educated men and keen observers. One of them has now been under treatment for five months, the other for four months. By regulating the calcium lactate carefully they can keep themselves infinitely more comfortable than for years.

In the course of these examinations many blood examinations were made. The one constant feature was the very small number of blood plates. Other observers have reported this, but, we believe, have not attached sufficient importance to it. Following such bloods from day to day one can not help thinking that there is a close relationship between the small number of the plates and the liability to bleed. In one of the cases, the plates suddenly disappearing, it was suggested, fully forty-eight hours before it began, that bleeding was about to recur. Blood from another patient (Case 2), taken the same day on which had occurred the most severe attack of epistaxis for months, showed a total absence of plates, whereas they had previously been present, but much below normal.

After the cessation of the bleeding arsenic was given with the idea of stimulating the hemogenetic organs. While the origin of the plates is still a much disputed point, the fact that they rapidly increased in number soon after beginning the arsenic in Case 5 would argue in favor of the bone marrow as their seat of origin.

During the last few years much has been written on the technic of counting the plates. Pratt's method of diluting the blood with a 2 per cent. solution of sodium metaphosphate and obtaining the ratio of the plates to the red cells is probably the best. While the actual enumeration is more accurate and especially valuable in reporting cases, the technic is arduous and can not be applied in many cases. Heretofore nearly all observers have agreed that little concerning the plates could be learned from a stained specimen. It must be remembered, however, that such investigations were made before the use of the azure dyes was common. We believe that by making evenly smeared, thin specimens and using a stain like Wright's, Leischmann's or the Nocht-Jenner of Hastings, which we have employed, fully as good an idea of the plates can be obtained as by counting them.

Secondary anemias, whether from hemorrhage, neoplasms or various other causes, always show a marked increase in the plates. In all the cases above reported there was at some time distinct anemia, but the plates were constantly reduced.

Another point of difference between the two varieties of anemia is that a leucocytosis is usual with secondary anemias, while it is uniformly absent with the anemia of purpura.

Keeping these points in mind, one should always be able to differentiate between a bleeding from a hemorrhagic diathesis and a hemorrhage from other causes.

4. Ztschr. f. klin. Med., 1905, vol. 56, p. 264.
5. Lancet, Dec. 6, 1902.

New Appliance

A BED LIFT.

H. H. JANEWAY, M.D.
NEW BRUNSWICK, N. J.

The form of apparatus here described has proved itself so useful in the care of many of my postoperative cases, that it has seemed as though both those connected with larger hospitals as well as many who do most of their work with limited nursing help would welcome its use. There are many forms of bed lifts manufactured by the instrument makers, but all of these, so far as I have been able to discover, are so arranged that the patient must be lifted bodily on the machine, as a patient would be lifted on a stretcher, before it can be used.

DESCRIPTION.

In this form of apparatus, however, one nurse is easily able to place three bands beneath the patient, and thus alone to lift the patient. The one passed beneath the shoulders is readily placed by first lifting one shoulder and pulling the band down underneath the back until the upper border is on a level with the axilla, then the other shoulder is lifted and the band adjusted on this side of the body; the band passing under the hips is first pushed beneath the small of the back, and then first by lifting, or slightly rolling up one hip, and then the other, it is

easily pulled down until its upper border is on a level with the anterior superior iliac spine. The other two bands are very quickly put in position, one beneath the calf of the leg, and the other attached to the same end-piece as the shoulder band, under the head (Fig. 1). The placing of all these straps is very rapidly done, being only a matter of a couple of minutes, and can all be accomplished by one person. The patient can now be lifted by one nurse and lies, when the bands are in their proper places, at perfect rest on them (Fig. 2.).

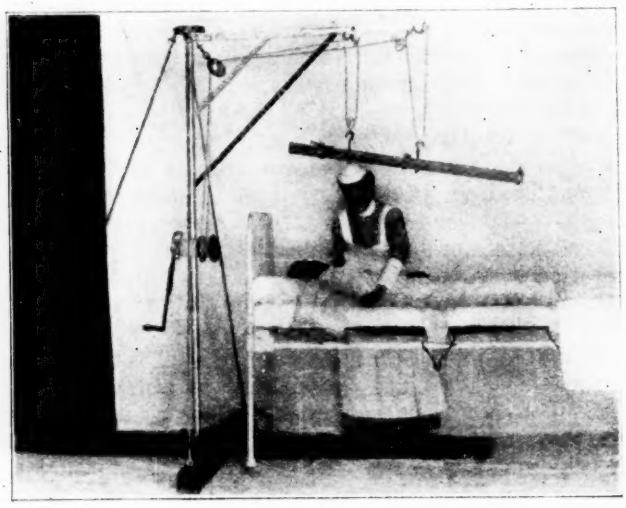

Figure 1.

BENEFITS.

The nurse is then at liberty to change the bed, turn the mattress, introduce the douche pan, or thoroughly rub the patient's back. In cases of any tendency for the development of a bed-sore in a patient who has been obliged to remain for a long time on the back, instead of using one strap beneath the hips, which would rub on the sore, two straps with the bed-sore in the interval may be used, and thus the developing bed-sore readily dressed. In this case one strap passed beneath the small of the back and the other under the thigh just beneath the buttocks. It will thus be seen that any part of the patient's body can be made accessible. The patient is

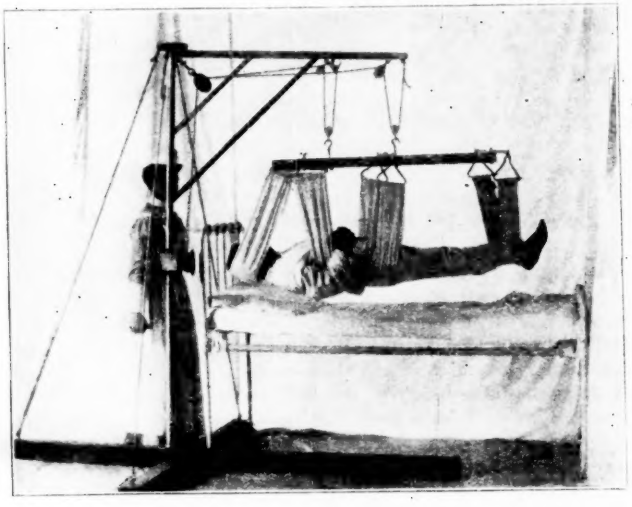

Figure 2.

still at perfect rest when so lifted. This method of introducing the straps can also be used when, on account of excessive weight, it is more difficult to pull the hip strap down under the pelvis.

Aside from making nursing easier, the apparatus, in many cases, proves a veritable Godsend to the patient. The rest to the back after being lifted is very great. This is especially noticeable after operations, and is most useful for a long time after such operations as nephrorrhaphy, where it is undesirable for a patient to turn off from the back for some little time. Even after an ordinary laparotomy the possession of a way of lifting a patient off the back without strain contributes greatly to the taking of any tension off from the wound, such as might otherwise be due to excessive restlessness or too early turning. Of course, to that class of cases in which turning is very difficult, such as fracture cases and chronic illnesses, the machine proves a real blessing throughout the entire sickness.

Lately I have used the machine in cases of typhoid fever at the home of the patient with most gratifying results. By swinging the crane out to the side of the bed one nurse is able to give a regular bath without strain to herself or exertion to the patient (Fig. 3). Where the means of the family are limited so that only one nurse can be engaged, this form of bed lift has really meant to the patient the difference of having the bath treatment or going without it. Each nurse who has thus far become accustomed to the use of the lift has expressed herself enthusiastically over it.

The simplicity of the machine enables it to be manufactured at comparatively slight cost, Charles E. Dressler, 143 East Twenty-third street, having reproduced the one here presented at a most reasonable figure.

In one family in which the expense of a nurse was out of the question, and in which the mother lay for several months

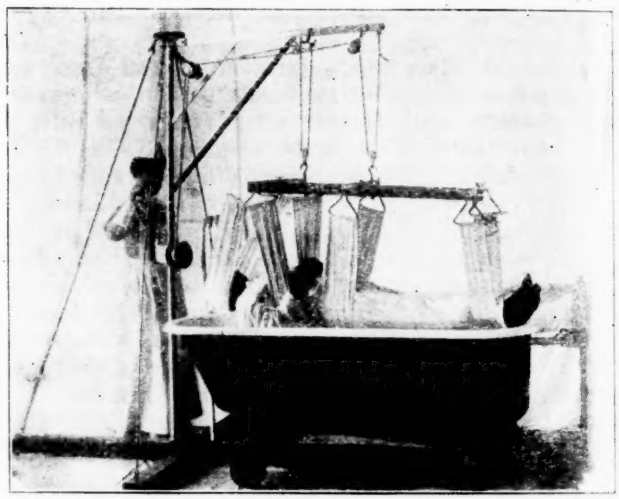

Figure 3.

dying from secondary carcinoma of the liver, being absolutely bed-ridden, and before death weighing over 200 pounds, this apparatus enabled the two daughters to care for their mother, to make her comfortable, and to keep her back and bed in good condition until she died.

Clinical Note

CONGENITAL DISLOCATION OF THE HIP.

REDUCTION AT AN EARLY AGE.*

PRESCOTT LE BRETON, M.D.
BUFFALO, N. Y.

In cases of congenital dislocation of the hip diagnosis is possible soon after the child begins to walk, because the limp in unilateral cases or the waddle and lordosis in bilateral cases call attention to the condition.

In a certain number of cases, which are, nevertheless, congenital, dislocation does not occur until a later time. The period depends on the amount of deformity present.

*Read at a meeting of the Eighth District Branch of the Medical Society of the State of New York, Aug. 17, 1906.

This fact was well illustrated in the case of a child under my observation. When 2 years old she had a waddling gait and slightly increased lordosis, but not one symptom of dislocation could be discovered. Three months later the waddle and lordosis had increased and all the typical signs of a double dislocation were present. Complete luxation occurred between the examinations.

There is considerable difference of opinion as to the time that treatment should be begun in these early cases. Some orthopedists, notably Lorenz, prefer to wait until the third year, when diapers can be dispensed with. Others argue that it is best to reduce at once, in spite of the inconvenience in trying to keep the child clean. Their reasons for doing this are that it is much easier to reduce the dislocation at this time, complications are less likely, the period of treatment is short and the outcome more favorable because time has not allowed further changes to develop in the joint and neighboring soft parts. In regard to this matter Lorenz[1] says:

Before beginning treatment, I wait not merely till the discrepancy in the gait declares itself beyond any question, but till the child is able to keep itself clean. Then, for reasons which are easily deduced, the treatment is so much simplified that I am accustomed to wait till the expiration of the second year before attempting reduction. It pleases me most if the children come to me for treatment after the expiration of the third year. By this time the unclean accompaniments following reduction are done away with; and on the other hand there is the important advantage that the greater tone of the soft parts materially enhances the stability of the primary position after the reposition is brought about, and so increases the chances for permanent reduction.

Ridlon[2] believes that those who have operated on cases under 2 years appreciate that, while it was perhaps more easy to return the head to the acetabulum than in the older cases, it was more difficult to keep it there. Wilson[3] thinks that, while it might appear on the surface that the earlier replacement is made the better it would stay, the fact exists that if the child is unable to walk a very important factor in the result is lost.

On the other hand we have the following opinions. Hoffa[4] says:

In my opinion, the earlier children with congenital dislocation of the hip are subjected to treatment, the better will be the results.

Heusner[5] thinks that early infancy, with its energetic growth, offers the best prospects for regeneration, while delay invites rapid aggravation of the deformity.

Freiberg[6] says:

The earliest possible replacement must be considered an important desideratum. The results amply justify the great additional care which is necessary to prevent the dressings from becoming soiled.

He reports the case of a child of 17 months of age, in which he obtained a good result. Bartow[7] reports three similar early cases, with good results. He also modifies the plaster cast in such a way as to prevent soiling. Hoffa covers the plaster cast with a solution of rubber to make it impervious to moisture.

The following case may be added to others in which treatment was instituted early:

C. S. P., male, aged 20 months, was referred by Dr. Dean, Mayville, N. Y., August, 1905. Family history, negative.

Personal History.—A first child. Labor had been prolonged for twenty-four hours, but neither force nor instruments had been employed. Baby was always in good health. For the previous two months, since he began to walk, a limp was noticed. This was so marked that it was really a lunge forward and downward on the right leg at every step. The child, however, made no complaint, but played and ran about freely.

Examination.—All the signs of a typical unilateral dislocation were found. The right leg was three-quarters of an inch shorter than the left. The trochanter was above Nelaton's line. On placing the finger on the upper edge of the trochanter and the thumb on the anterior spinous process, and then applying intermittent traction to the leg, the trochanter very plainly slid up and down under the finger, showing a lack of firm apposition between the femur and the pelvis. The right thigh was half an inch less in circumference than the left. The gluteal muscles of the right side showed a slight atrophy. There was no spasm. Motions were very free except abduction, which was slightly limited. On rotation, the trochanter did not move in the arc of a circle. On flexing and adducting the thigh, the head of the femur could be felt under the gluteal muscles. An *x*-ray picture, taken by Dr. W. W. Plummer, showed the elevation of the trochanter on the right side. It also seemed to show anteversion of the femoral neck.

Operation.—On Aug. 29, 1905, reduction was accomplished under chloroform anesthesia by the Lorenz method. The replacement was not difficult. The apposition was firm, and it was necessary to bring the thigh down from the Lorenz position to full extension before redislocation occurred, when the bone would jump suddenly back on the dorsum of the ilium. When reduced, there was the usual shortening of the hamstrings. The plaster spica was protected by rubber dam and the mother was instructed in detail about the care of the skin. A high shoe allowed free walking.

Postoperative History.—The child was sent home, returning in November, when the hip was examined and found in good condition. Dislocation did not occur even when the thigh was brought down parallel to the opposite one. In this extended position the legs were of equal length, and the firmness of the reposition argued well for the future. A new cast was applied with flexion reduced to 45 degrees, and with lessened abduction. On Feb. 3, 1906, a similar state was found, and the flexion was further reduced. On March 24, there was found for the first time a distinct fulness in front of the acetabulum near the anterior inferior spine, which disappeared during thigh flexion. The inference was plain that, owing to the deformed neck of the femur, the result would be an anterior transposition. A removable spica was made for night use, to hold the thigh during sleep in the primary position. This was continued for six weeks. A half-inch raise in the left shoe continued a slight abduction of the right leg.

Examination on July 2 showed a functional cure. The fulness could be felt, as before, in front of the acetabulum. The legs were of equal length and circumference. No limp and no increase of lordosis. The child appeared normal, and had had perfect freedom from restraint for over two months.

REMARKS.

It would seem that in this case, at least, a wait for a period of a year or over would have been a mistake. The mother did not complain of the extra trouble involved in caring for the child, and she was successful, inasmuch as no cast had to be changed because of soiling. The baby grew rapidly during its confinement, playing contentedly every day. The result obtained is the same as in the majority of cases, i. e., a functional cure by anterior transposition. Permanent replacement of the head in the acetabulum is obtained in a small minority of cases only. The frequency of this forward position of the head of the femur is supposed to be due to the anteverted neck and the shortening of the pelvi-trochanteric muscles, which latter is caused by the primary position of Lorenz. As the leg is finally brought to full extension these two factors throw the head forward out of the acetabulum.

1. Lorenz: Am. Jour. Orthopedic Surgery, vol. ii, p. 231.
2. Ridlon: Am. Jour. Orthopedic Surgery, vol. iii, p. 154.
3. Wilson: Am. Jour. Orthopedic Surgery, vol. iii, p. 155.
4. Hoffa: Am. Jour. Orthopedic Surgery, vol. ii, p. 239.
5. Heusner: Phil. Med. Jour., Feb. 14, 1903, p. 309.
6. Freiberg: Am. Med., March 5, 1904.
7. Bartow: Am. Jour. Orthopedic Surgery, vol. iii, p. 147.

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(*Continued from page 1021.*)

CREOSOTAL.

CREOSOTE CARBONATE.

Creosotal is a mixture of carbonic acid esters, analogous to guaiacol carbonate, prepared from creosote.

It is prepared by passing a current of carbonyl chloride into a solution of creosote in sodium hydroxide, and purifying the oily product by washing with weak soda solution and with water.

It is a yellowish, thick, honey-like, perfectly clear and transparent liquid, containing 92 per cent. of creosote. It is odorless and has a bland oily taste. It is insoluble in water, but soluble in alcohol, ether, chloroform, benzene and in fixed oils.

The addition of a few drops of ferric chloride solution to the alcoholic solution should not cause any change in color. On boiling with potassium hydroxide solution the odor of creosote is evolved.

It is incompatible with boiling alkalies.

Actions and Uses.—Creosotal has the same action as creosote, but is claimed to be non-toxic and devoid of irritant properties. It is recommended as a substitute for creosote for internal exhibition in tuberculosis, pneumonia, and as an intestinal antiseptic.

Dosage.—From 0.3 to 2.0 Gm. (5 to 30 grains) for children, to 1 to 4 Gm. (15 to 60 grains) for adults in milk, coffee, wine, cod-liver oil or emulsion. Externally it may be applied undiluted.

Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). Fabrik von Heyden, Radebeul, near Dresden. German patent No. 58,129; U. S. patent No. 501,235; U. S. trademark.

DENTALONE.

A saturated solution of chloretone (which see) in a liquid composed of oil of cloves, oil of gaultheria and oil of cassia, and containing 30 per cent. of chloretone.

It is a reddish-brown oily liquid of characteristic odor and taste.

Actions and Uses.—Dentalone possesses pronounced anesthetic properties and is intended for use by dentists in the treatment of exposed nerves in decayed teeth.

Prepared by Parke, Davis & Co., Detroit, Mich. U. S. trademark.

DERMATOL.

A name applied to Bismuthi Subgallas, U. S. P.

Manufactured by Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

DIABETIN.

LEVULOSE. FRUIT SUGAR. FRUCTOSE.

Diabetin is a pure, crystallized fructose (levulose), $CH_2OH.CHOH.CHOH.CHOH.CO.CH_2OH = C_6H_{12}O_6$, absolutely free from dextrose (ordinary glucose).

It is prepared from invert sugar by precipitation as calcium salt, decomposing the precipitate with carbonic acid, and crystallizing. It is a colorless, odorless, slightly hygroscopic, crystalline powder, having a sweet taste comparable with that of ordinary cane sugar (saccharose). It is readily soluble in water and in diluted alcohol, slightly soluble in alcohol, insoluble in absolute alcohol and in ether.

Its aqueous solution reduces Fehling's solution and rotates the ray of polarized light to the left (—90.2).

Actions and Uses.—Levulose is metabolized in the body by other agencies than those that act on dextrose and most of the other sugars and appears to be more completely utilized by the diabetic organism than the other sugars.

It is recommended for the nutrition and for sweetening the food and drink of diabetics, in pulmonary tuberculosis, infantile malnutrition and marasmus.

Dosage.—It is given in diabetes in daily quantities of 30 to 60 Gm. (1 to 2 ounces); in grave forms of the disease the amount is reduced to from 12 to 24 Gm. (3 to 6 drams) daily.

Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York). U. S. trade-mark No. 21,864.

DIONIN.

ETHYL-MORPHINE HYDROCHLORIDE. CODETHYLINE HYDROCHLORIDE.

Dionin, $C_{17}H_{17}NO(OH)(OC_2H_5)HCl + H_2O = (C_{19}H_{24}O_3ClN + H_2O,)$ is the hydrochloride of the ethyl ester of morphine.

It is prepared by the action of ethyl iodide on morphine in the presence of alkali, the basic product being purified by crystallization from hot alcohol, dissolving the crystals in hydrochloric acid and crystallizing.

It is a white, microscopically crystalline powder, odorless and only slightly bitter. It is soluble in about 7 parts of water and in 2 parts of alcohol, insoluble in ether and in chloroform. It melts completely with decomposition at 125° C. (257° F.).

It gives the usual reactions for alkaloids. It is distinguished from morphine salts by its insolubility in excess of alkali, and by not producing an immediate blue color, but gradually developing a blue-green coloration, when its solution is added to dilute ferric chloride solution containing a fragment of potassium ferricyanide.

It is incompatible with alkalies and their carbonates and alkaloidal reagents, as potassio-mercuric iodide, tannic acid, picric acid, etc.

Actions and Uses.—It is claimed that this compound acts like morphine without producing constipation, nausea or lassitude. It is the conclusion of some good observers that it possesses no advantage over codeine. Applied to the eye, it causes a local vaso-dilation, leading to acute conjunctival edema.

Dionin is recommended to relieve pain, especially in respiratory affections, as an antispasmodic in whooping-cough, for insomnia and externally in the treatment of corneal affections, conjunctivitis, iritis, etc.

Dosage.—0.015 to 0.06 Gm. (¼ to 1 grain). Externally it is applied in 10 to 20 per cent. solutions.

Manufactured by E. Merck, Darmstadt. (Merck & Co., New York). German patents Nos. 102,654, 107,225, and 108,075. U. S. trademark.

DIURETIN.

A name applied to theobromine-sodium salicylate, which see.

Manufactured by Knoll & Co., Ludwigshafen, Germany (E. Merck & Co., New York).

DUOTAL.

A name applied to Guaiacolis Carbonas, U. S. P.

Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). U. S. patent No. 466,913. U. S. trademark.

DUOTONOL.

A name applied to a mixture of equal parts of calcium tonol and sodium tonol. (See tonols.)

Actions and Uses and Dosage.—See Glycerophosphates.

Manufactured by Chemische Fabrik auf Actien, vorm E. Schering, Berlin (Schering & Glatz, New York). U. S. trademark.

ELIXIR EUPNEIN.

COMPOUND ELIXIR OF HEROIN, CREOSOTE AND TERPIN HYDRATE, SCHIEFFELIN.

A preparation said to contain in each dose of 8 Cc. (2 fluidrams): heroin 0.0026 Gm. (1/24 grain), terpin hydrate 0.13 Gm. (2 grains), creosote 0.3 Gm. (5 grains), in a menstruum containing 30 per cent. of alcohol with glycerin and aromatic essential oils.

Actions and Uses.—From its composition it appears to be well adapted to use in chronic cough from bronchitis, etc.

Dosage.—4 to 12 Cc. (1 to 3 fluidrams).

Prepared by Schieffelin & Co., New York. U. S. trademark No. 36,419.

ELIXIR SAW PALMETTO.

ELIXIR SABALI, SANTALI, ET ZEÆ MAIDIS.

A preparation said to represent in each 30 Cc. (fluidounce): Saw palmette berries 8 Gm. (120 grains); sandalwood 2 Gm. (30 grains); and cornsilk 8 Gm. (120 grains).

It is stated to contain 36.7 per cent. of alcohol.

Actions and Uses.—The constituents of this preparation are credited with diuretic properties and believed to be sedative to the genitourinary tract and to exert a curative action on the inflamed mucous membrane, especially in chronic cases.

Dosage—4 to 16 Cc. (1 to 4 fluidrams) three times a day.

Prepared by Parke, Davis & Co., Detroit, Mich.

EMPYROFORM.

Empyroform is a condensation product of birch tar and formaldehyde.

According to the patent specifications birch tar is boiled with formaldehyde solution and the hot liquid poured into hydrochloric acid. When cold, the solid mass is collected and washed until free from acid.

It is a grayish-brown, almost odorless powder, insoluble in water, but readily soluble in solutions of caustic alkalies, in acetone, and in chloroform.

Actions and Uses.—Empyroform is an antipruritic, sedative and desiccant. It is said to be superior to tar and free from irritant or toxic effects.

It is claimed to be useful in all stages of eczema, psoriasis, lichen, urticaria, prurigo, pityriasis, etc.

Dosage.—It is applied as a 5 to 10 per cent. ointment, 10 to 20 per cent. zinc paste, 10 to 20 per cent. tincture, and 37.5 per cent. suspension.

Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York). U. S. patent No. 761,260. U. S. trademark No. 43,419.

EPICARIN.

OXYNAPHTHYL-ORTHO-OXYTOLUIC ACID.

Epicarin, $C_6H_3(OH)(COOH)(CH_2C_{10}H_6OH)2:3:1 = C_{18}H_{14}O_4$, is β-naphthol-hydroxy-toluic acid.

It is obtained by the action of chlormethyl-salicylic acid on a solution of *b*-naphthol, in glacial acetic acid, thus:

$$C_6H_3(OH)(COOH)(CH_2Cl) + C_{10}H_7OH = C_6H_3(OH)(COOH)(CH_2C_{10}H_6OH) + HCl$$

It forms colorless or yellowish needles, melting at 190° to 195° C. (380° to 389° F.), difficultly soluble in water, but easily soluble in alcohol, ether, acetone, and in soaps. It dissolves in oils on the addition of a little ether. It has the character of a strong acid, forming well crystallized salts, which, however, are sparingly soluble in water, particularly the sodium salt. On exposure to air it acquires a reddish color due to oxidation; if it is then recrystallized from glacial acetic acid, colorless crystals are again obtained which melt at 166° C. (338° F.). These, however, retain a little acetic acid, but lose this by heating at 120° C. (248° F.).

The alcoholic solution of epicarin produces an intense blue color with ferric chloride. When heated with concentrated sulphuric acid, a red-brown solution, having a vivid green fluorescence, is produced. If shaken with chloroform and solution of potassium hydroxide, a yellowish color, changing later to yellowish green is developed, thus distinguishing epicarin from *b*-naphthol, which produces a deep blue color under the same conditions.

Being a strong acid it is incompatible with alkaline hydroxides or carbonates, especially those of sodium with which it forms an almost insoluble salt. It should not be exposed to the air, which colors it red.

Actions and Uses.—Epicarin is a non-poisonous antiseptic and parasiticide. Administered internally, it is excreted mostly undecomposed. It has been found useful in the treatment of skin diseases, particularly scabies, tinea tonsurans, prurigo and certain forms of eczema.

Dosage.—It is used externally only in the form of 5 to 20 per cent. ointment, with petrolatum or wool fat (lanolin) as base, or in the form of oily or alcoholic solutions (10 per cent.).

Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). U. S. patent applied for.

ERYTHROL TETRANITRATE.

ERYTHROL NITRATE. TETRANITROL.

Erythrol tetranitrate, $C_4H_6(NO_3)_4 = C_4H_6O_{12}N_4$, is the tetranitrate of erythrite or butane-tetrol, $C_4H_6(OH)_4$.

It is obtained by the nitration of the tetratomic alcohol erythrite.

It forms colorless crystalline scales, insoluble in cold water, readily soluble in alcohol, melting at 61° C. (141.8° F.). On percussion it explodes much like nitroglycerin.

Actions and Uses.—It is a vasodilator and antispasmodic, like nitroglycerin. Its action is slower and more lasting; it begins in 15 minutes and persists for three or four hours.

It is recommended in angina pectoris and cardiac diseases. It is reported as especially useful as a prophylactic in preventing anginal pain.

Dosage.—Because of its explosiveness it is marketed in the form of tablets, each containing 0.03 Gm. ($\frac{1}{2}$ grain). One or two tablets every four to six hours.

Manufactured by E. Merck, Darmstadt (Merck & Co., New York). German patent No. 81,664.

ETHYLENEDIAMINE.

AETHYLENDIAMIN. AETHYLENE DIAMINE. ETHANE DIAMINE. *a,b*-DIAMINO-ETHANE.

Ethylenediamine, $C_2H_4(NH_2)_2$, is a substitution compound of ethylene and ammonia.

It is prepared by heating ethylene bromide with an excess of alcoholic ammonia for 12 hours at 100° C. (212° F.), removing the ammonium bromide formed, by filtration, evaporating the filtrate to dryness, distilling the residue with potassium hydroxide, and collecting the fraction distilling between 115° and 130° C. (239° to 266° F.) and bringing the liquid by successive purifications to a constant boiling point at 117° C. (242.6° F.).

It is a clear, colorless, thick liquid, having a sp. gr. 0.97, boiling at 117° C. (242.6° F.), without decomposition, having a strong alkaline reaction, an ammoniacal odor and a caustic taste. It is freely soluble in water, and may be mixed with cresols, but is not miscible with benzene (benzol) or ether. It dissolves albumin very readily, even when boiled.

Being a strong base its incompatibilities are about the same as those of sodium hydroxide.

Actions and Uses.—It is said to be non-corrosive. It is recommended as an albumin solvent for the solution of false membranes in diphtheria and similar affections of the mucous membranes. It is recommended for use in the form of kresamine (which see).

Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York).

EUCAINE.

The "Eucaines" are two closely allied synthetic bases, which were originally differentiated as eucaine "A" and eucaine "B," but are now designated as "Alpha-eucaine" and "Beta-eucaine" respectively, alpha-eucaine being a synthetic derivative of triacetonamine, while beta-eucaine is a synthetic derivative of vinyl-diacetonekalmine. Both of these bases are supplied as hydrochlorides and are recommended as substitutes for cocaine, over which they are claimed to have certain advantages.

They are described under alpha-eucaine hydrochloride and beta-eucaine hydrochloride.

EUCALOIDS.

A name applied to gelatine capsules, each containing 0.3 Cc. (5 minims) of pure oil of eucalyptus.

Dosage.—1 to 2 globules three or four times a day.

Prepared by Edward G. Binz, Los Angeles, Cal.

(*To be continued.*)

Travel Notes

DISEASES AND HOSPITALS OF AFRICA.

NICHOLAS SENN, M.D.
Professor of Surgery in the University of Chicago; Professor and Head of the Surgical Department, Rush Medical College.
CHICAGO.

(*Continued from page 1051.*)

THE HOSPITALS OF PRETORIA AND CAPE TOWN.

Pretoria, the former proud capital of the republic of South Africa, is only two hours distant from Johannesburg by rail. There is nothing to be seen here which would remind one of the terrible struggle which the brave Boers made in defending their rights and in maintaining their independence. Their leader, the late President Kruger, sleeps now in the little cemetery, surrounded by members of his family, who preceded him in death, and blue violets are blooming on his grave, symbolic of the purity of his private and public life. The city remains the same as before the war, but the magnificent public buildings, built and paid for by the Boers, are now in possession of the new administration. The Boers, a law-abiding people, have accepted their defeat in humility. Their worldy losses will be repaired in course of time, but the wounds inflicted by the cruel war will never heal under the present methods of foreign administration.

The city has about 25,000 inhabitants and is beautifully situated in a valley, surrounded by picturesque mountain scenery. It is an ideal capital city without the noise, smoke, and disturbances of manufacturing establishments. It has wide well-paved streets, many beautiful residences, very interesting botanic and zoologic gardens combined, good public schools, fine churches and a most excellent little hospital.

Fig. 1.—Pretoria Hospital.

THE PRETORIA HOSPITAL.

This hospital was completed, as indicated by an inscription on the corner-stone laid by President S. J. P. Kruger, June 21, 1890. The hospital, built of brick on the pavilion plan, has accommodations for 170 Europeans and 80 natives (Fig. 1.). It is charmingly located in a quiet outlying part of the city on an eminence and in the midst of large grounds, tastefully laid out and ornamented with evergreen trees, shrubs and a profusion of flowers. The general wards are airy, well-lighted and everywhere the most scrupulous cleanliness prevails. The snow-white linen, the cheery fires in open grates, the happy contented faces of the patients, white and black, old and young, suggest that the management of the institution is in competent hands (Fig. 3.). The nursing is in charge of five English sisters, assisted by 45 pupil nurses, who remain in training three years before they are permitted to apply for the final examinations. The corridors and walls are paved with large squares of artificial stone admirably adapted for this purpose. Dr. G. Thornton, the medical superintendent, lives in a comfortable, well-appointed house in the same grounds. The nurses' home, recently completed, is what such an institution should be, a real home for the nurses with all the comforts of a home. Dr. Thornton and his wife, formerly a trained nurse, devote their whole time and attention to the best interests of the institution and the comfort and well-being of its inmates. Dr. Thornton is a careful, conscientious practitioner and thoroughly devoted to his patients, regardless of their color. The natives in this hospital receive more consideration and care than in any other hospital visited. In the female wards for natives, I saw a patient about 35 years old, the subject of advanced carcinoma of the uterus. The woman was a half caste. Recently a case of molluscum fibrosum was observed in the hospital and through the courtesy of Dr. Thornton I make use of a photograph which he took himself (Fig. 2.).

Oil of cinnamon in three-drop doses, in emulsion, is the routine medication in typhoid fever. The mortality of this disease in the hospital does not exceed ten per cent., certainly an enviable record. In 3 out of 24 cases of perforation of the bowel in typhoid cases, life was saved by operative interferance. Pneumonia here, as in all other hospitals in Central South Africa, is one of the most frequent and fatal of all diseases. The mortality ranges between 10 and 40 per cent.

From the report of the hospital for 1904-1905, I have gleaned a number of important facts. The operating theater is not what it should be, and a recommendation to rebuild it is one of the first items in the report. The *x*-ray apparatus and room are in good working condition, as shown by a number of specimen illustrations exhibited by Dr. Thornton. Reference to venereal diseases is made as follows: "Our experience shows that venereal diseases, both among the males and females, are becoming increasingly prevalent in the natives, thereby constituting a grave danger to public health, seeing that so many are employed in domestic service." Few sufferers of this class of disease are actually admitted into the hospital, but many are treated as "out-patients." The whole number of patients in this hospital during the year was 1,697, of whom 929 were Europeans and 768 natives. Only fifty-two cases of malaria came under treatment, and all the patients recovered. Of 140 patients with pneumonia, 33 died, and of the total cases, 97 were natives, with 28 deaths. Twenty-four natives suffering from tuberculosis of the lungs were admitted and 11 of these died. Of 33 cases of scurvy occurring, the disease proved fatal in one. Four cases of leprosy and one of filariasis, all in natives, were observed during the year. Among the native patients the diagnosis of malignant tumor appears 6 times and of benign tumor, strangely, only once. Concerning the malignant tumors, no distinction is made between sarcoma and carcinoma.

The farther south I travel and the more the natives are bleached out by the admixture of European blood, the more I find them receptive to the diseases of the whites, and this applies with special force to appendicitis and malignant disease. My observations in different parts of the world have convinced me that the nearer the human race approaches the animals in eating and habits of life the more they are exempt from malignant disease and appendicitis.

Two cases of appendicitis occurring in natives are recorded in the report, of which one proved fatal. Of 5 cases of gunshot wounds occurring in natives, all recovered. Dr. A. W. Sanders is the visiting surgeon and exercises a general supervision over the treatment of surgical cases and performs most of the major operations. During the year, 361 operations were

performed, covering nearly the entire field of surgery, and of those 20 patients died. The greatest mortality was in cases of abscess of the liver, 6 cases with 4 deaths and operations for malignant tumors, 7 cases with 2 deaths.

TRANSVAAL LEPER SETTLEMENT.

Five miles from Pretoria in a valley surrounded by hills is the Transvaal Leper Settlement, founded by the Boers long before the war and now administered by the new government. It is a large village made up of comfortable little houses in separate groups for males and females, whites and blacks. The administration building, in which reside the superintendent and physician and supervising trained nurse, and in which the pharmacy and offices are located, are modern, substantial structures. The number of lepers who reside here now is 330, of which 280 are natives and 50 whites, most of the latter are Boers of the lower classes. The village is laid out in streets and includes a neat little Dutch Reformed church, school house and a building for public amusements. Small vegetable and flower gardens contribute much to mitigate the picture of human woe and suffering seen on all sides. Segregation is aimed at but not strictly enforced. Friends and visitors are admitted on stated days and by obtaining permission the lepers can leave the enclosure but must return the same evening. The settlement is under government control and all expenses are paid out of the public fund. Patients are paid a small

Fig. 2.—A native patient in Pretoria Hospital with fibroma molluscum

sum for their work, if they choose to employ a part of their time in that way. This is an excellent thing, as useful employment chases away melancholy and with the little money earned the patients can buy for themselves such things as will make them more comfortable and happy. All the patients were decently dressed, their surroundings were clean and their general appearance indicated that they are well cared for and make the best of their misfortune. I saw here many cases in which the disease had produced frightful ravages, both in the tubercular and in the anesthetic forms. The treatment pursued is entirely symptomatic, no vaunted specifics are tried. Miss A. M. Whiteman, an English trained nurse, is the ministering angel in this valley of human suffering and misery. The patients respect and adore her and she is devoted to them. She speaks Dutch and all the native tongues and all come to her when they are in trouble, or in need of her services, which she so cheerfully and willingly renders them.

"For man to assist man is to be a God.
This is the path to eternal glory."

Plinius Major.

CAPE TOWN.

Cape Town is the metropolis of South Africa and the capital of Cape Colony. It is situated at the base of Table Mountain on the south-west shore of Table Bay. It was founded by the Dutch in 1562, and ceded to Great Britain in 1815. The location of the city is picturesque in the highest degree. It faces the broad Table Bay and behind it are the almost perpendicular huge gray granite walls of Table Mountain. The city was laid out by its Dutch founders with mathematical precision, all its principal streets running in straight lines from the mountain to the sea and being crossed again by the other less important ones at right angles. It is the easiest city of its size for the stranger to find his way without a guide; he can not possibly get lost as the city occupies the narrow but long belt of land hemmed in on one side by the mountains and on the other side by the bay. Its length, with the many suburbs, must be at least ten miles, while its width does not exceed anywhere three-quarters of a mile. The main streets and sidewalks are wide and well paved and kept in good repair and thoroughly clean. The perfect system of sewerage, the abundant supply of pure water from the mountains and the superb climate make it one of the healthiest cities in the world. It is lighted by electricity and the two-story electric tramway cars promote easy transportation to all parts of the city and suburbs.

The principal business street is Adderly street, which is to Cape Town what State street is to Chicago or Broadway to New York. At the business end of this street a broad street-like walk lined on both sides with venerable oak trees leads to the base of the mountain. On the right side of the magnificent walk are the Botanical Gardens and South African Museum. In these gardens will be found nearly all the principal trees and shrubs indigenous to Africa, all labeled in botanical terms. It

Fig. 3.—Native ward in Pretoria Hospital.

is a pity that the common names by which the people know the trees and shrubs are not given in the legends. The museum contains a fine collection of wild animals of Africa, well mounted and kept in excellent condition. The collections of minerals, birds and insects are very large and well arranged. The oldest landmark in the city is the castle, an old-fashioned fortress on the very edge of the bay, built by the Boers in 1660; in its almost medieval Dutch architecture, it forms a curious sight among the modern surroundings.

Table mountain furnishes the botanist with the greatest variety of interesting and rare specimens of plant life. Cape Colony has the largest variety of flowering plants to be found in any country, some 7,000 having been classified. On Table mountain and its slopes and ravines, 400 different varieties of heather have been found and analyzed. This small shrub has a profusion of small tubular flowers in vivid colors, red, yellow and white. These flowers are sold in large bunches on the street for a shilling each. The most interesting tree on Table mountain is the silver tree (*Leucadendron argenteum*) with its long narrow, willow-like shining silvery leaves arranged in dense imbricated clusters at the very end of the thick, abruptly ending twigs. The fruit is a cone the size of a duck egg.

(To be continued.)

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[*For other information see second page following reading matter.*]

SATURDAY, OCTOBER 6, 1906.

THE INTESTINAL ORIGIN OF PULMONARY TUBERCULOSIS.

It is the general belief that pulmonary tuberculosis in the overwhelming majority of cases is the result of inhalation of tubercle bacilli. This seems such a natural and easy way to account for tuberculosis of the lungs. This explanation is supported by numerous experiments on animals in which forced inspiration of bacilli appeared to be followed by direct localization of bacilli in the lungs. The inhalation theory is also in harmony with the well-known fact that living bacilli occur in the dust and in droplets of sputum about tuberculous patients that use little or no care to prevent contamination of their surroundings; and with the further fact that commonly there is no lesion discoverable elsewhere in the body to which one can trace the pulmonary disease.

Nevertheless important objections are being urged against the inhalation theory of pulmonary tuberculosis, especially in its extreme form, which tends to minimize the dangers of the alimentary route of infection. Behring's contention that the milk of tuberculous cows is the most important source of tuberculosis is so well known that details need not be discussed. The recent anatomic studies by Harbitz[1] of the distribution of tuberculous lesions, especially in children, afford many points in support of the view that tuberculosis of the lungs and adjacent lymph nodes may result from invasion through the digestive tract. It is not feasible to bring forward in detail all the facts and interpretations bearing on this question. Suffice it to state that until recently there existed no really satisfactory evidence of an experimental nature showing that tubercle bacilli introduced in the digestive tract actually are primarily or rapidly localized in the lungs and thoracic lymph nodes. The experiments of Calmette and Guérin[2] of Lille appear to furnish important information in regard to this phase of the question. These investigators find that in cattle and goats the introduction of a single quantity of virulent bacilli by means of the esophageal tube, particular care being taken to avoid contamination of the respiratory tract, is followed regularly in from 30 to 45 days by the development of subpleural and peribronchiolar tubercles at the tops and anterior borders of the lungs. Later the alveoli may be invaded from extension of the lesions which primarily are intracapillary. As others have shown before, the bacilli can pass through the walls of the stomach and intestines without leaving any lesions; on reaching the chyle vessels the bacilli are taken up by leucocytes and conveyed to the regional lymph nodes, whence they may escape into the thoracic duct without necessarily causing lesions until they reach the capillaries of the lungs and the thoracic lymph nodes as well as, but more rarely, elsewhere. As localization occurs, Calmette and Guérin believe that the leucocytes which carry the bacilli become immobilized by toxic bacillary products. They also point out that previous experiments which appeared to demonstrate tuberculous invasion by the respiratory tract are open to the objection that the bacilli introduced in reality were absorbed by the digestive tract.

Assuming that the experimental results here outlined in great brevity are applicable to human beings, it necessarily follows that particular care must be taken to avoid all possible sources of contamination of food and drink by tubercle bacilli. Dust, sputum droplets, contaminated flies, soiled hands and articles of various kinds may be the means of introducing bacilli of human origin into food and drink. Efforts should also be directed to exclude the carrying of bacilli into the mouth in more direct ways. The possibility that tuberculosis, pulmonary and otherwise, in reality is of intestinal origin oftener than expected hitherto clearly does not tend to essentially alter in any way the usual preventive measures now in practice. As to milk and other products of tuberculous cows, our attitude, on the whole, will remain unchanged and the practical procedures will depend, as heretofore, on the view taken as to the disputed question of the infectivity for human beings of bovine tubercle bacilli.

Calmette and Guérin have shown also that animals may survive the single introduction of tubercle bacilli into the stomach, the resulting pulmonary lesions healing completely. Such animals are now immune to tuberculosis. The bearing of this demonstration on the human disease we propose to discuss later.

1. Jour. Infectious Dis., 1905, vol. ii, p. 143.
2. Ann. de l'Inst. Pasteur, 1905, vol. xix, and 1906, vol. xx, 609.

THE NEW BUILDINGS OF THE HARVARD MEDICAL SCHOOL.

It is the general opinion of all who have had the pleasure of seeing them—and this includes the visitors to the memorable Boston session of the American Medical Association—that the new buildings of the Harvard Medical School are the most beautiful academic or public buildings in America. It is pleasant to note that, in their construction, usefulness for the varied purposes of a great medical school has not in any way been sacrificed in order to have architectural beauty and distinction. The architects have succeeded admirably in combining perfection from the utilitarian as well as from

the architectural point of view. As is reported in detail in this issue,[1] these buildings have now been dedicated with appropriate ceremonies to the purpose for which they were designed and they are now in use for the education of medical students and for medical investigation. Medicine has received a large addition to its resources in this country and all friends of medical progress unite in grateful thanks to the persons who gave the money necessary and in congratulating Harvard Medical School on the completeness and permanence of this part of its external equipment.

So far as the buildings necessary for instruction and investigation in the sciences fundamental to clinical medicine are concerned, this school is now in a most favorable and enviable situation. But medical education and investigation require much more than great buildings. In order that buildings like those at Harvard can be put to their highest usefulness, there must be liberal endowments to pay the men who are to work in them and to furnish the equipment and supplies with which to work. Undoubtedly the same spirit of altruism that prompted wealthy men and women to build the monumental structures just dedicated to medicine in Boston will result in adequate recognition of the choice opportunity and privilege here offered to put more money to the best possible use. And it should be emphasized that an institution requiring the bachelor's degree for entrance on medical work, and possessing such an incomparable group of buildings as Harvard now does, will be expected to do far more than to carry on a high grade of undergraduate medical instruction. Here, if anywhere, should flourish scientific investigation in medicine and special opportunities should be offered not only recognized successful investigators, but also those who promise to develop into such.

Finally, a word in regard to clinical medicine at Harvard. The buildings just dedicated do not provide for clinical work. From recent public utterances by members of the Harvard faculty, it appears that at present the facilities for clinical work, though known to be of high order, are not altogether satisfactory. The hospitals and dispensaries at present are far removed from the medical school proper. This in itself is undesirable. We see, then, that the new Harvard buildings are built for the future to which the friends of Harvard look with hope for adequate endowment, on the one hand, and better provision for clinical medicine, on the other. May these hopes be realized soon.

THE ALCOHOL QUESTION.

At the recent meeting of the British Medical Association the vexed question of the value of alcohol generally and of its use as a drug was dealt with at various times. We referred two weeks ago to the decreased use of alcohol and the increased use of milk in the London hospitals, as reported by Sir Victor Horsley at the luncheon given by the Canadian Temperance Union. Sir Victor Horsley, continuing this subject, said that he not only regards alcohol as the most potent bane of civilization and the cause of physical and mental deterioration of a not inconsiderable portion of the British race, but, further, that he is able to see very little good in alcohol as a drug. In cases of shock subsequent to a severe operation he recommends the employment of another drug than alcohol. The latter he condemns in unsparing terms.

Prof. Sims Woodhead, of Cambridge University, England, took the ground that if it can be proved that alcohol is a remedial agent in any disease, let it be used, but until it has been so proved it should not be employed. He claimed that up to the present time experiments in this direction have obtained such comparatively slight results that they afford no basis for asserting that alcohol has any definite value as a drug. Indeed, investigators working under seemingly like conditions have come to conclusions so diametrically opposed that they have effected little more than to bring confusion to the minds of seekers after the truth.

In the section on therapeutics, Dr. Blackader, of McGill University, expressed the opinion that the action of the heart stimulated by alcohol has been overestimated and that it is sometimes feeble and transitory. The action on the nervous system is more complex, but it is certainly depressing on the centers of judgment, discernment and self-control. Alcohol in medicinal doses increases the bactericidal powers of the blood, while a long series of experiments has shown that large doses in infectious diseases increase the power of the disease poison. It has a food value and, used in fevers and in cases of exhaustion or of indigestion, may be of marked benefit, as it makes no tax on the organs of digestion, but, on the contrary, favors secretion and favors action on the hepatic cells.

Dr. Meltzer, of New York, was far more decided in his support of alcohol as a drug. He asserted that those who opposed its use in disease were those who had never made practical experiments, and that he placed no value on statistics. He drew attention to the fact that, as a rule, German investigators do not believe in the harmfulness of alcohol. In his opinion, alcohol, judiciously used, is capable of stimulating the heart to activity and supports immunity in infectious diseases. Alcohol in health may be a poison, but in disease it is beneficial.

Dr. W. E. Dixon, Cambridge, England, pointed out that the heart rate is no criterion as to whether alcohol stimulates the circulation, that the accelerating action of alcohol on heart rate is due to its stimulating effect on the medulla. According to Dr. Dixon the conflicting results obtained by different investigators are due to the fact that they undertake their experiments on animals under the influence of an anesthetic, which greatly

1 See page 1113.

neutralizes the action of the alcohol. Another point to which he drew attention was that in order to accelerate the action of the heart it is necessary to give an exact small dose of alcohol, and that but a slight increase over this quantity produces decided slowing. In his opinion, if a man who is suffering from disease is accustomed to the use of alcohol he should not be completely restricted from its use when sick, and a man suffering from delirium tremens should be given alcohol.

Dr. Osborne, of New Haven, thought that alcohol should be regarded purely as a drug and that its well-known harmfulness when used as a beverage to excess should be set aside when discussing its therapeutic action. There are no pathologic disturbances when alcohol is used as a drug, and, therefore, it should be thus used in cases which call for its employment. He held that it is harmful when employed solely as a cardiac stimulant, merely acting as a whip to an already overstrained system. The opinion was practically unanimous that the employment of alcohol in cases of delirium tremens should be condemned, and Dr. Rose Bradford, of London, took the occasion to warn medical men against a custom which prevails somewhat widely of recommending alcohol to convalescent patients, and especially to women.

The discussion has not increased our knowledge on the subject to any appreciable degree. To all intents and purposes, so far as the elucidation of moot features of the alcohol question is concerned, we are where we were.

FOOTBALL FATALITIES.

The newspapers are already announcing deaths from football, and yet the season is only just opened. It was hoped that the modification of the rules effected by the intercollegiate committee last winter would be adopted and that they would eliminate many of the injuries and all of the serious accidents. Apparently in some places they have not been adopted or have failed to accomplish this purpose. Such modifications as have been made were only as the result of a large amount of pressure brought to bear on the rules committee by medical journals and newspapers, by the protests of faculties and alumni and by the popular feeling that no sport is worth so many lives as football has been costing in recent years.

It is rather difficult for most people to understand why there should be so much insistence among college men on the necessity for continuing Rugby football since, as the game has developed here in America, it has become inevitably bound up with so many rough features. Radical modification of the rules, such as would make the game much less rough, has always been opposed on the grounds that this would so lessen the interest in the sport as to cause it to cease to be the drawing card for large audiences that it now is. It is well known that college athletics derive their main support from the large gate receipts obtained at football games. To the physician it seems utterly absurd to urge that a question of money such as this should stand in the way of modification in a university sport that is intended to save lives and to prevent accidents that produce permanent injury. But even the argument itself with regard to gate receipts on the drawing power of football, irrational, indeed ludicrous as it is, loses all its force when the records of the attendance at English football games are carefully studied. The open game of football in England, which has nothing like the fatalities of our American Rugby, draws even larger crowds. The record attendance at a London football game is over 110,000 and frequently there are 50,000 people present. It is evident then that this argument which has so far had so much weight with college men is simply founded on the lack of knowledge of football conditions elsewhere.

If we are to have this year a repetition or an approximation of the awful record of recent years and of last year especially, it will practically amount to a conviction of our university authorities of lack of power to control certain of the vicious elements in student human nature. If gate receipts are to continue to be a supposed justification for rough play that draws a crowd, then the epithet of Maxim Gorky, which created so much resentment last summer, can not be gainsaid, i. e., that we are an essentially brutal people, since we delight in stories of cruelty and bloodshed in newspapers and find pleasure in spectacles in which life is put in danger.

PATHOLOGISTS IN HOSPITALS FOR INSANE.

The movement to provide for the services of pathologists in hospitals for the insane appears to be extending. Thus Illinois has arranged[1] for civil service examinations to select such assistants. While the complete plan for this important addition to the service of these institutions has not been made public (so far as we are aware), it is evidently the intention to make the laboratory at one of the hospitals the central laboratory through which the work in the other institutions may be stimulated and in a measure directed and coördinated. At all events, largely, we believe, as the result of the activities of the Board of Charities under the high-minded guidance of its president, Dr. Frank Billings, a new factor enters into the work of the Illinois hospitals.

In the aggregate the general result of this new departure should be to put the daily routine work of the institutions on a higher plane than can be hoped for in the complete absence of the stimulus and interest that come from study and investigation. It has frequently been pointed out that the best clinical work, diagnostic and therapeutic, is done in those clinics that associate the treatment of disease with teaching and investigation. The patients, then, are sure to receive almost immediate

1. THE JOURNAL A. M. A., Sept. 15, 1906, page 868.

benefit, mental and physical, from the introduction of progressive methods of study in the hospitals for the insane.

In the next place, continued, careful study of the rich material in these institutions increases, little by little, our knowledge of insanity and of nervous and other diseases, and among the facts thus gathered many may prove to have far-reaching future importance. Furthermore, the establishment of positions like those now in mind should increase the real opportunities for research, and the more numerous and attractive such opportunities the more likely that men with the power of accomplishment will seek them, and the greater the chance of securing for psychiatry the occasional man of genius who can make discoveries and develop new lines of research.

Undoubtedly, the two most important steps that a state hospital for insane can take is to divorce its management from the baneful influence of "politics" and to provide the men and the means to place its psychiatry on a firm, progressive basis. Unless the first step is taken, it is exceedingly difficult, if not impossible, to take the second.

THE SCIENCE AND ART OF EATING.

Our Athenian contemporary, Professor Bedelar Maturin, has a hobby which he rides on every possible occasion—the exploitation of the work which Brillat-Savarin wrote a century ago on "The Physiology of Taste." The latter believed that human beings should cultivate the wholesome enjoyment of life; that the education of the tastes and the appetites should be an index of the degree of civilization. The man of good instincts and refinement should know how to eat and drink, to converse (a lost art to-day), to appreciate a beautiful landscape, to enjoy the fragrant flowers—in all things to deport himself sanely and soberly. Like the much-maligned Epicurus of old, Savarin was an exceedingly temperate man. They both comprehended well, wise philosophers as they were, that true pleasure lay not in gluttony and other inordinate appetites, but in the knowledge and practice of reasonable conduct in all the manifold aspects of existence. "The love of good living is not merely a physical, but an intellectual and a moral quality, as well, almost deserving to rank as a virtue." We would omit the "almost." Savarin's book (which de Balzac termed "adorable") was written with a double object in view: "to lay down the fundamental theory of gastronomy, so that she would take her place among the sciences in that rank to which she has an incontestable right," and "to define with precision what must be understood by the love of good living, so that for all time that social quality may be kept apart from gluttony and intemperance, with which many have absurdly confounded it." Lest the reader imagine Savarin's work to be lacking in profundity, we quote the following: "The most momentous decisions of personal and of national life are made at table." "But for life the universe were nothing; and all that has life requires nourishment." "The fate of nations depends on how they are fed." "The man of sense and culture alone understands eating." "A good dinner is but little dearer than a bad one." These and other aphorisms in the book are exceedingly practical: "One should eat slowly and in minute portions;" this is, in essence, the Fletcherism of today. "Digestion, of all the bodily functions, has most influence on the *morale* of the individual." "The great majority of us eat and drink too much;" is not this dictum announced to-day with trumpets, as if its utterance had never before been essential? Savarin was probably the first exponent of the modern science and art of gastronomy, which has been enormously developed since his day. But among the many tomes on food and dietetics now extant, among the mass of literature on practical cookery to be found in the magazines, no writing will be found more scientific or more useful than that which this genial and kindly Frenchman, a century ago, left us for a legacy of good cheer. If it were more read and its precepts followed, there would be less dyspepsia, less crime and fewer divorces.

THE OPERATIVE TREATMENT OF VARICOSE VEINS OF THE LEG.

Varicose veins in the lower extremities occur as the result of varied conditions, some inflammatory, some of less definite character. It is probable that hereditary tendency is of etiologic significance in this connection. The disorder is due to incompetency of the valves whose function it is to prevent the stagnation of blood in vessels, the contents of which must be propelled in opposition to the force of gravity. Phlebitis, complicating or following pregnancy, or some operative procedure or acute infection, is the cause in a considerable proportion of cases. The erect posture long maintained in predisposed individuals will account for another group of cases. Palliation can be afforded in many instances by means of the recumbent decubitus or elevation of the affected member or members, or by the use of elastic constriction, but operative intervention becomes necessary for radical relief, the object being to effect occlusion of the saphenous vein. By one method of procedure the superficial veins of the affected part are divided between ligatures, while by another the saphenous vein and its branches are excised throughout a varying extent, and by a third the vein is divided between ligatures. In a recent communication dealing with this subject Dr. Robert T. Miller[1] reports the results of operative treatment in 128 cases of varicose veins of the lower extremities and associated disorders observed at the surgical clinic of the Johns Hopkins Hospital, some of which were followed for periods of ten years and more. One hundred and seven of the cases occurred in whites, and 21 in colored individuals; 73 in males and 55 in females. The largest number of cases in any decade developed between the years of 20 and 29, namely 41; 81 developed before 40, and 37 after. The disorder appears thus not to be a manifestation of senility. In 40 cases a definite history of phlebitis was obtained; pregnancy was responsible for

1. Bull. Johns Hopkins Hosp., September, 1906, p. 289.

the condition in 25, typhoid fever in 9, erysipelas in 2, pneumonia in 1, acute enteritis in 2, operation in 1. In 88 cases no inflammatory factor could be ascertained; among the causes assigned were constipation, excessive walking or standing, pelvic tumor. The right leg was involved alone in 21 cases, the left alone in 25; both legs were involved in 74, and in the majority of these the left was the more affected. The leg was involved alone in 91 instances, the leg and the thigh together in 25, the thigh alone in 1. In addition to the favorable results from the operation named first it has the advantage of avoiding division of large cutaneous nerve-trunks, with secondary anesthesia or hyperesthesia. Also there is no subsequent edema. Further, the operation can be performed readily under local anesthesia. Finally, there is less likelihood of recurrence of the condition after adequate excision than after ligation. Pulmonary embolism—characterized by sudden dyspnea, cyanosis, tachycardia, signs of collapse, elevation of temperature—may occur as a complication of any of the modes of operation mentioned.

THE PASSING OF DOWIE.

In its editorial notice of "The Passing of Dowie" the Chicago *Tribune* remarks that there is for him in his downfall perhaps more a feeling of pity than exultation, even among those who have regarded him from the outset as among the chiefest of impostors. To a certain extent this is true, the fall is a severe one, but, after all, it is not more, or even as much, as the man deserves or as his dupes have suffered. It is said that, while he deceived others, he was also himself deceived, that he had faith in himself and was the victim of a delusion. That may be the case. A man is capable of creating a delusion in himself, as he may repeat a lie so often that he finally actually believes it is truth. Dowie may have been deluded, but there was certainly a vast amount of method in his delusions. During the past dozen years or more he has been appropriating the savings of thousands of honest dupes, and what he has not spent of it in personal extravagance and luxury he has claimed as his peculiar personal property, making his self-styled prophetship a matter of the most outrageous personal profit. There have been many of his kind. The starting of a new religion is an old confidence game, but there have been very few in which the financial motive has been more prominent and which have been worked out with such success. We might except Eddyism, perhaps, of which it is hard to say whether the female figurehead or the very evident working syndicate are the true "profits." That, too, must come to its end, though it may develop into a sort of religious sect, as has Mormonism, or may at least continue in a more or less modified form, for some time to come. Even now its doctrines are something like the so-called British constitution, modified to meet every case that may arise. Its projectors and managers do not apparently, like Dowie, rake in the savings of the poor. They take the shekels of the well-to-do, for whom their system is specially elaborated, with its catering to the lust of the eye and the pride of life and its easy-going denial of sin and pain. In some respects, therefore, Dowie was the more contemptible sinner, and his earlier passing out of pernicious activity is the less to be regretted. His sect for a while may continue, but the medical fallacies and absurdities, on which it was so largely based and which have been, to a great extent, responsible for so much individual human suffering, have already practically disappeared.

MEDICAL FALLACIES.

In the last number of the *American Magazine* is an article on popular medical fallacies by Dr. L. K. Hirshberg which, while rather nihilistic in tone, is, on the whole, commendable. A number of popularly accepted propositions with regard to medical matters are directly contradicted. Virchow used to say that all of the medical fallacies accepted generally by the people have been at one time doctrines recognized by physicians. Undoubtedly many of the present-day popular medical fallacies even yet are accepted by certain physicians, and it is this that helps to keep them alive. For instance, there are still physicians who say that boils are always a manifestation of a blood disease. While it is true that a run-down condition will predispose to the appearance of boils, these are practically always due to infection from without. It is suggested that men suffer more from boils on the neck than do women, because the former wear starched collars that are likely to produce lesions through which infective agents find their way beneath the skin. The possibility of taking cold in a boil or in a cut or wound, which is believed in by most people, is thrown out as one of the old-fashioned notions that we are through with. Certain popular remedies, such as sage and other old-time teas, are discussed, and whatever efficacy they have is attributed to the true cause—the hot water employed in making them. Of course, the mental suggestion that something has been done which is likely to be beneficial removes the despondency that comes with illness of any kind and helps to restore the patient to normal conditions. In the same way the vaunted efficiency of many liniments is attributed rather to the rubbing associated with their application than to any remedial virtue that there may be in the drugs of which the liniments are composed. The popular impression that there is a specific remedy for each disease and that nothing but this specific will cure it is at the bottom of many of these fallacies. This was an old-time medical notion that has not as yet gone out entirely, but whose disappearance will do much to make popular medical ideas more sane and sensible.

THE EXISTENCE OF HYDROPHOBIA.

The lay press of late has been considerably interested in certain allegations published in the organ of the humane societies that no such disease as hydrophobia exists, and the idea is naturally acceptable. The eminent physicians who are quoted as questioning the existence of the disease can properly speak from their own experience and have a right to any honest opinion they may hold on the matter, but to support such claims by saying, as some of them are said to do, that they know of no other

physician or surgeon who has seen a case, would imply a more limited acquaintance with the leading men of the profession and their work than ought to be the case. There have been plenty of cases of hydrophobia published in the medical press by eminently respectable authorities whose word and judgment on any other disease would not be questioned—and why should they be in this? Some of these cases reported leave no ground for supposing that any mental element entered into the causation of the symptoms, the victims even dying without any recognition whatever of the true nature of their disease. If there are any of the obscurer nervous diseases that are clearly established as clinical entities, hydrophobia is one, and its comparative rarity, for which we ought to be sufficiently thankful, does not in any way affect the fact that such a disease exists.

Medical News

ALABAMA.

College Opens.—The forty-first annual session of the Medical College of Alabama, Mobile, opened October 3.

Hospital Notes.—Jefferson County Medical Society has endorsed the proposed charity hospital to be erected in Birmingham, and a committee has been appointed to frame a bill providing for the erection and to decide whether bonds shall be issued to cover the cost of constructing and maintaining the hospital.

State Did Not Make Out Its Case.—In the case of the state of Alabama against Drs. Philander S. Boyd and Breckinridge J. Duckett, Florence, charged with manslaughter due to the use of a too strong solution of carbolic acid, the judge closed the case of the state September 20 by taking it out of the hands of the jury and dismissing the defendants, as the experts agreed that the death was not due to carbolic acid poisoning.

CALIFORNIA.

Fined for Selling Impure Milk.—Emmanuel Fagundes, Oakland, was fined $100 in the police court September 14 for selling milk which was found to contain two-fifths added water.

To Equip Laboratories.—The San Francisco board of health has called on the board of supervisors to provide $6,000 for the equipment of the chemical and bacteriologic laboratories of the board.

Diphtheria.—The Grant public school, Oakland, was closed September 15 by order of the board of health on account of an epidemic of diphtheria among the pupils. More than 20 cases have been reported during the last few days.

Isolation of Contagious Diseases.—The board of supervisors of San Francisco has passed the ordinance proposed by the health board, authorizing the latter to remove at its discretion patients suffering from contagious disease.

Hospital News.—Mrs. Herbert Kraft has given a site for a hospital at Red Bluff, to be organized under the name of the St. Elizabeth's Hospital and to be conducted by the Sisters of Mercy.——A county hospital for San José County is soon to be erected at a cost of $65,000 on the site of the old county building, San José, which was destroyed by the earthquake last April.——A hospital is planned at Grass Valley, to be under the charge of Dr. John T. Jones.

Health Report.—The nineteenth biennial report of the State Board of Health was submitted to the governor September 15. The chief recommendations of the board are a larger appropriation for the State Board of Health, the more rigid enforcement of sanitation at summer resorts, and that vaccination ordinances be more strictly enforced. Many and extensive improvements are recommended for the State University at Berkeley, where sewerage is reported to be bad. A hospital for the students is also recommended. During the year 20,909 births were reported, equivalent to 11.7 per 1,000. The deaths during the same period were 27,026.

Coroner's Report.—During the fiscal year 1905-06 the coroner of San Francisco County reports 2,196 deaths, 428 of which were due to the earthquake and fire of April 18. The remainder are classed as follows: 1,200 from natural causes, 340 from accident, 177 from suicide, 36 from homicide, and in 11 cases the cause of death was undetermined. Of the suicides 142 were males and 45 females; illness was given as the cause of the greatest number of suicides, drinking next, insanity third, and finally financial troubles. By occupations laborers headed the list, housewives came next and clerks and bartenders third and fourth respectively. No lawyers or physicians appeared on the suicide list.

COLORADO.

August Deaths.—The total number of deaths in the state during August was 856, equivalent to an annual death rate of 15.52 per 1,000. Of the deaths 46 were due to typhoid fever, 9 to diphtheria and 8 to scarlet fever.

Comparative Morbidity During August.—During August 464 cases of typhoid fever were reported, an increase of 291 cases as compared with July; 91 cases of scarlet fever, a decrease of 14 cases; 28 cases of diphtheria, a decrease of 3 cases, and 4 cases of smallpox, a decrease of 26, as compared with the previous month.

Physicians Injured.—Dr. H. Calvin Lefurgey, Durango, while making a professional call, was thrown from his buggy and suffered a comminuted fracture of the left arm.——Dr. Wilbur W. Bulette, Pueblo, while driving with Dr. William H. Campbell, few miles north of Pueblo, was thrown from the buggy in a runaway accident and sustained severe contusions. He was removed to the Pueblo Hospital.

New Hospital.—A new dispensary building is to be erected in connection with the Denver and Gross Medical College, to cost about $16,000. Land has been secured adjoining the present laboratory building and work will soon be initiated.——Ground was broken September 20 for a sanatorium to accommodate 52 patients at Glenwood Springs, to be under the charge of Dr. William F. Berry.

DISTRICT OF COLUMBIA.

Personal.—Dr. George F. Simpson, inspector in the district health department, has resigned to take effect September 28.——Dr. T. S. Vincent, Washington, fell from the second story window of a hotel at Braddock Heights, Md., and broke his right leg at the ankle.

Health Conditions.—In the report of the health department for the week ended September 22 it was announced that the improvement in typhoid fever conditions was more pronounced than at the close of the previous week. There was reported a decrease in the number of cases from 288 to 280. During the week 37 new cases were reported and 45 patients discharged, with only 2 deaths having occurred. No new outbreak of smallpox was reported. The total deaths numbered 127, as compared with 108 during the previous week and 104 as compared with the corresponding week of 1905. The principal causes of mortality were: Consumption, 16; heart disease, 13; nephritis, 10; malignant disease and diarrheal diseases, each 9; pneumonia, 6, and cerebral hemorrhage and bronchitis, each 4.

ILLINOIS.

Hospital to be Built.—The plans and specifications for the Graham Hospital, Canton, are nearly completed and construction will be begun this fall.

Personal.—Dr. Josiah M. Cody, Tremont, has been elected physician for the Tazewell County Farm.——Dr. Coleman J. Eads, Oquawka, has been obliged to discontinue practice on account of ill-health, and has sold his property to Dr. C. E. Kaufmann.——Dr. James W. Sanders, Decatur, has been elected a member of the board of directors of the Bethsaida Hospital Association.

Pills Prohibited.—At a meeting of the Streator city council, September 19, an ordinance was passed prohibiting the posting of any handbills or other advertising matter for "patent medicines," etc., in any street or public place in Streator, and also prohibiting the distribution of any samples of medicine within the city limits. The fine for violation of this ordinance is not less than $5 nor more than $50 for each offense.

Chicago.

Automobile for Health Department.—The council finance committee, on September 28, authorized the health commissioner to purchase an automobile for the emergency inspection work.

Personal.—Dr. James Alexander Harvey returned from Berlin, October 1.——Dr. and Mrs. Arthur R. Elliott are expected to return from Europe this week.——Mr. John Lynn Thomas, Cardiff, Wales, spent a few days in Chicago last week and was entertained by the surgeons of the city.

Building Commissioner Enforces Regulations.—By order of the building commissioner, on September 27, the three upper floors of the Jenner Medical College were closed for several hours, on account of failure to comply with tne provisions of the building laws. The commissioner ordered two fire escapes put in the building, more exits cut through and exit signs placed.

Health of the City.—During the week ended September 29, 44 fewer deaths from all causes were reported than during the week previous, although there were 15 more deaths from violence. The important death causes showing decreases were: Acute intestinal diseases, 23; consumption, 21; apoplexy, 6; typhoid fever, 5; cancer, 3; heart disease, 2, and diphtheria, 1. The total number of deaths for the week was 538, equivalent to an annual death rate of 13.69 per 1,000. There were 57 more deaths than for the corresponding week of 1905. The principal death causes were: Acute intestinal diseases, 99; consumption, 57; violence (including suicide), 54; nephritis, 47; pneumonia, 37; heart diseases, 34, and cancer, 22. There were 12 deaths reported from suicide, an increase of 7 over the preceding week.

IOWA.

Site for Hospital.—It is reported that the state board of control has decided to locate the State Tuberculosis Sanatorium on the Grant farm, near Fort Dodge.

Typhoid Fever at Dubuque.—Owing to the prevalence of typhoid fever in Dubuque, the people have been warned to boil the drinking water. The disease is said to be prevalent in all sections of the city.

Bacteriologic Report.—The secretary of the State Board of Health reports that during August 382 examinations were made in the bacteriologic laboratory. Of these 85 were for diphtheria, 69 for typhoid fever and 184 for tuberculosis.

Medical College Opens.—The Sioux City College of Medicine and Surgery opened for its annual session September 19 with addresses by Dr. George S. Browning and the dean, Dr. Hial S. Wheeler. The following faculty changes were reported: Dr. R. M. Conmey, professor of physiology, and Dr. G. E. Barr, assistant in hygiene.

Personal.—Dr. and Mrs. William Cammack, Salem, have started for London en route for South Africa, where they enter the service of the American Board of Commissioners for Foreign Missions.——Dr. A. W. Crary, Boone, has been made a medical instructor in the medical department of the State University, Iowa City.

Hospital Board Meeting.—At the annual meeting of the board of the Eleanor Moore Hospital, Boone, held September 17, the following directors were elected: Drs. Alpheus A. Deering, George D. Rowe, J. Henry Nordstrom, George H. Stanger, Lemuel A. Barrett, Evalene Peo, Clyde W. Payne and Kate S. Harpell. During the year more than 2,000 patients were treated and more than 100 operations performed.

KENTUCKY.

Money for Sanatorium.—At a meeting of the board of directors of the Kentucky Anti-tuberculosis Association, September 21, it was decided to attempt to raise the $11,000, the balance necessary for the erection of the proposed tuberculosis sanatorium.

New Hospital.—A contract for the erection of the building of the Good Samaritan Hospital, Lexington, has been let. The building will cost $12,000 when completed.——The new King's Daughters' Hospital, Shelbyville, was formally opened September 19. The building is three stories high with 12 rooms, including two wards of three beds each.

Personal.—Dr. Florence Meder, who succeeds Dr. Minnie C. Dunlap at the Eastern Kentucky Asylum for the Insane, Lexington, has arrived and assumes her new duties as third assistant physician. Dr. Dunlap has been transferred to the Western Kentucky Asylum for the Insane, Hopkinsville.——Dr. Donald R. Jacob has been elected president, and Dr. Oliver H. Kelsall, secretary, of the Louisville Academy of Medicine, and Dr. Gavin C. Fulton has been re-elected treasurer of the organization.

Typhoid Fever and Diphtheria.—Mercer County is said to have an epidemic of typhoid fever, and it is reported that there are at least 200 cases in the county and in Harrodsburg.——An epidemic of typhoid fever is said to be raging at Hindman.——Diphtheria in malignant form is reported to be epidemic in the western part of Cumberland County.——Typhoid fever is reported to be epidemic and on the increase in the eastern part of Bath County. Diphtheria is also reported to be prevalent throughout the county.

MARYLAND.

New Hospital.—Ground was broken September 19 for the new wing of the Frederick City Hospital, to be erected by Mrs. Margaret Hood as a memorial to her late husband, James Miflin Hood.

Automobile Accident.—Drs. Henry P. Fahrney, Frederick, and Morris A. Birely, Thurmont, while making a professional call in an automobile belonging to Dr. Fahrney, were seriously injured by the overturning of the machine at the foot of a steep hill.

State Society Meeting.—The semi-annual meeting of the Medical and Chirurgical Faculty of Maryland was held September 27 and 28. In the address of welcome, the governor suggested that the portraits of two of the most eminent founders of the faculty be placed in the senate chamber. Dr. Charles M. Ellis, Elkton, offered a resolution suggesting that $200 be appropriated to cover the expense. A committee was selected composed of Drs. Charles M. Ellis, Elkton; Eugene F. Cordell, William H. Welch, Herbert Harlan and Robert W. Johnson, Baltimore, to select five or more names from the 101 founders to be submitted to the faculty, which will at that time select the two founders to be honored.

Baltimore.

New Municipal Hospital.—The members of the Municipal Hospital commission have decided on the plans of the building to be constructed for the isolation hospital, for which $25,000 was appropriated by the city council.

University Reorganized.—The medical faculty of the Baltimore University School of Medicine has reorganized and an effort will be made to secure re-establishment of membership in the Association of American Medical Colleges. It is said that a new hospital and medical school building is to be erected in the northern part of Baltimore and that the institution will open under the new régime this fall. The organization of a dental school is also being considered.

Typhoid and Diphtheria Increase.—The report of the health department for the week ended September 22 shows an increase in the number of cases of diphtheria and typhoid fever as compared with the corresponding week of last year. Deaths from all causes for the week were 212, or 16 more than for the corresponding period of last year. Of these, consumption caused 29; diarrhea, 24; Bright's disease, 16; cancer, 13; heart disease, 12, and congenital disability, 10. Twenty-four cases of diphtheria were reported and 51 cases of typhoid fever, 12 more than for the corresponding week of last year.

Personal.—Dr. and Mrs. John C. Hemmeter have been the guests of Dr. C. K. Pell, head of the department of medicine of the University of Amsterdam, and Prof. K. Schapp, Groningen, where they attended the opening ceremonies of the university.——Dr. Ira Remsen has returned after a summer in Maine.——Dr. Howard A. Kelly was given the honorary degree of LL.D. at the four hundredth anniversary of the foundation of the Aberdeen University.——Dr. Albertus Cotton has returned from Europe.——Dr. Llewellys F. Barker was taken ill at the opening exercises of the Harvard Medical School and was taken to a hospital at Brookline, Mass.

MASSACHUSETTS.

Leper Alleged to be Cured.—It is reported that Mary Barros, a leper in Wareham, after a year's incarceration and two years' surveillance at the State Leper Colony, Penikese Island, is to be released as cured.

School Inspectors Appointed.—Drs. William Galvin, Henry J. Millard, Philip Potter, George A. Fagan, Alfred A. Harper, Wilfred A. Brosseau and Ransford D. Canedy have been appointed inspectors of schools at North Adams.

New Hospital.—The plans have been accepted for the new Franklin County Public Hospital, to be erected in Greenfield at a cost of about $40,000. The building first to be erected will contain accommodations for about 30 patients.

Personal.—Thomas J. Bean, Lowell, has been made a member of the board of health, vice Dr. William B. Jackson.——Dr. Frank L. Morse has been appointed city physician of Somerville, but will continue also as bacteriologist of the city.——Dr. Laura A. C. Hughes, Boston, was elected president of the Spanish-American War Nurses' Association, September 6.

Pure Milk for Infants.—The Cambridge Medical Improvement Society has finished its first year's experiment of providing pure and sanitary milk for infants, during the summer season, which closed September 15. The city appropriated

$1,000 for the experiment, $800 of which was expended. During the year 35,000 bottles of modified milk were distributed under the auspices of the city.

Close of Floating Hospital Season.—The trustees of the Boston Floating Hospital announce the close of the season's work and issue a circular giving the comparative statistics for the period of four weeks on the old and new boats, showing the increased work that the institution has been able to accomplish with the new boat.

	Old boat.	New boat.
Number of days' care given to permanent patients	1,436	2,958
Number of trips made by day patients	1,298	1,086
Number of trips made by mothers of sick children	1,151	1,349
Number of trips made by well children under six years of age, who could not be left at home	477	690

Medical School Inspection.—The Springfield Board of Health has had printed a circular containing rules for medical inspection, which details the duty of inspectors as follows: The identification of pupils requiring medical aid; the detection of children suffering from communicable diseases; the detection of other than communicable diseases and ailments, and the detection of defective eyesight, hearing or other disabilities. It is directed in the circular that the following described children should be sent to the inspectors on Monday and Thursday morning of each week: Every child returning to school after an illness or absence from unknown cause without a certificate from the board of health; every child suffering from contagious or infectious disease, or showing signs of ill health, and every child who returns to school after having been excluded by the medical inspectors. Children showing signs of the following diseases are to be sent home immediately: Smallpox, scarlet fever, measles, chickenpox, tuberculosis, diphtheria, influenza, tonsillitis, whooping-cough, pediculosis, scabies, trachoma, ringworm and impetigo contagiosa.

MICHIGAN.

Interurban Railway Surgeons.—The Michigan United Railway has established a complete surgical system over its lines and has appointed the following surgeons: Lansing, Dr. Harry A. Haze, surgeon-in-chief; alternate, Dr. Robert E. Miller; St. Johns, Dr. Samuel E. Gillman; alternate, Dr. W. A. Scott; Jackson, Dr. C. G. Carnell; alternate, Dr. H. Duane Brown; Parma, Dr. Vene D. Farmer; Albion, Dr. Alfred J. Abbott; alternate, Dr. George C. Hafford; Marshall, Dr. L. A. Harmon; alternate, Dr. Frank M. Foote; Battle Creek, Dr. William S. Shipp; alternate, Dr. Clarence S. Gorsline; Augusta, Dr. Charles E. Doyle, and Kalamazoo, Dr. Albert B. Cornell; alternate, Dr. Leonard H. Stewart.

MINNESOTA.

Hospital Nearly Ready.—The new Bethesda Hospital, Crookston, is expected to be ready for occupancy about October 1. The building is of white stone, two stories in height, and is equipped with all modern conveniences.

Diphtheria.—Diphtheria in virulent form is reported at Sauk Center.——It is reported that diphtheria exists in three families near East Park, White Bear Lake, and complaint has been made to the board of health that the members of the affected families are not quarantined.

Personal.—Dr. Henry M. Bracken, secretary of the State Board of Health, has been elected president of the National Conference of Licensing Embalmers' Boards.——Dr. George H. Freeman, senior interne at the City Hospital, St. Paul, has been selected as senior assistant at the St. Peter State Hospital for the Insane, vice Dr. C. J. Tuomy.

Red Cross Organized.—The Sons of Veterans of Minneapolis have organized a Minneapolis Red Cross Society, with the following officers: Major Thomas T. Wareham, surgeon-in-chief; Capt. George D. Bentley, assistant surgeon; Lieut. W. J. Burns, passed assistant surgeon, and Drs. W. G. Dawson and D. Edmond Smith, contract surgeons.

NEW YORK.

Bequeaths Library.—By the will of the late Dr. Louis A. Weigel, Rochester, his medical library is bequeathed to the Reynolds Library, Rochester.

Boil Water.—The health commissioner of Buffalo announces the presence of the colon bacillus in the city water, enjoins that all drinking water be boiled, and emphasizes the need of a filtration plant.

Personal.—Dr. and Mrs. Henry Adsit, Hornell, have sailed for Italy.——Dr. John L. Heffron, Syracuse, returned from abroad September 15.——Dr. J. Wilson Poucher, Poughkeepsie, returned from Europe, September 18.

New Hospital.—The Ilion Emergency Hospital has been incorporated with a board of 11 directors. An anonymous benefactor has donated $25,000 for the erection of the building, and an acre of land has been offered as a site for the new institution.

Society Changes Name.—The Practitioners' Society of Rochester, composed of women, has been authorized by the Supreme Court to change its name to the Blackwell Society of Rochester, in honor of Dr. Elizabeth Blackwell, the first woman graduate of medicine in America. The change became operative September 8.

After-Care of the Insane—Five months ago the State Charities Aid Association started an organized movement for the after-care of the insane. It had been observed that many persons discharged as cured of insanity soon relapsed when returned to their former surroundings and mode of life; this organization endeavors to follow such patients and to place them in such employment and amid such surroundings as will prevent a relapse. It is claimed that there is a large field for this kind of work and that the organization is accomplishing much good.

Hospital Notes.—The Buffalo General Hospital trustees have purchased for $85,000, 118 feet frontage on Goodrich Street, east on Ellicott, which backs up on the land now owned by the hospital. On this site will be built the Children's Hospital, for which Dr. De Villo W. Harrington made a bequest estimated from $75,000 to $100,000.——The common council of Lockport has directed the city clerk to advertise for bids for a new city hospital to cost $15,000. The city has donated the site and $5,000; $5,000 has been raised by subscription and the same amount was donated by the late Augustus Keep.

Illiteracy.—The second annual report of the state educational department shows that 58 of the 61 counties have a lower proportion of illiterates than New York City in their population over ten years of age. In the state there are 54 illiterates per 1,000 population, and in New York City 81. The average number of illiterates per 1,000 is 59 for the entire state, and there is one illiterate to every 18 voters. Eighty per cent. of the illiterates are of foreign birth, but there are more illiterate children of native than of foreign parentage. There is dire need for the enforcement of the law compelling children to attend school in the rural districts.

New York City.

Bequests.—The will of the late Henry I. Barbey gives St. Luke's Hospital $25,000, the Society of the New York Hospital $20,000, and the Home for Incurables attached to St. Luke's Hospital $10,000.

Health Board Raids Building.—As repeated warnings from the health department to the effect that certain sanitary changes in the building at the corner of Broadway and Canal Street had been disregarded, the police officers of the department drove tenants and help from the building and plumbers were immediately put to work to remedy defects.

Personal.—Dr. Kirke Stanley is at the Harlem Hospital, recovering from a fracture of the base of the skull, supposed to have been due to an assault with robbery, as when he was found his watch and money were gone.——Dr. Charles Senter has been appointed temporary head of the Bronx health department, vice Dr. Gerald M. V. Shiel.——Dr. Robert J. Morrison, Brooklyn, sailed for Europe September 15.

Contagious Diseases.—There were reported to the sanitary bureau for the week ending September 22, 354 cases of tuberculosis, with 154 deaths; 154 cases of diphtheria, with 16 deaths; 134 cases of typhoid fever, with 29 deaths; 59 cases of scarlet fever, with 2 deaths; 55 cases of measles, with 2 deaths; 30 cases of whooping-cough, with 8 deaths; 5 cases of cerebrospinal meningitis, with 7 deaths; and 9 cases of varicella, a total of 800 cases, with 218 deaths.

The Season's Milk Report.—The Nathan Strauss pasteurized milk depots have just completed their fourteenth season. The quantity of milk distributed during the past summer exceeds that of any other season by 471,855 bottles. The total number of bottles given gratis or for which the sum of one cent was paid was 3,142,252, and the number of glasses drunk on piers, from booths and in parks was 1,078,405. The increased demand for this milk makes it evident that the task of supplying modified milk to tenement house babies will soon be beyond the bounds of private charity and it will devolve on the municipality to shoulder the burden. Mr. Strauss has just signed contracts for the erection of a new building on East Thirty-second Street, to be devoted exclusively to the modification and pasteurization of milk.

Typhoid Fever.—From Jan. 1, 1906, up to Sept. 12, 928 cases of typhoid fever have been reported to the sanitary bureau. During the week ending September 8 the greatest number of cases occurred, 81 in all, while during the week ending June 5 there were only 5 cases. The greatest number of deaths occurred during the week ending August 25, 23 being the total. Up to July 14 the number of living cases reported did not exceed 20. Of all the cases reported a large per cent. were residents of tenement houses, and mostly house workers. The department of health examined the blood and urine in over 80 per cent. of the cases reported; in 50 per cent. of the cases the Widal test showed positive and the diazo in 33 per cent. In the majority of the cases the spleen was enlarged and rose spots were present. Water showed as the most common cause in nearly 34 per cent; next, milk, 25 per cent.; while oysters were the least common cause, representing 5 per cent. The board of health of Brooklyn announces that from August 14 to Sept. 2, 1905, the number of cases of typhoid fever reported in Brooklyn was 689, while during the same period this year only 173 cases were reported. This is attributed by the board to the campaign of education instituted last year.

NEW JERSEY.

State Asked to Withhold Allowance.—The commissioner of charities and correction made a report to the governor, September 21, in which he advised the state to withhold the allowance for the support of the insane patients in the Salem County almshouse until proper accommodations have been provided for the patients.

Personal.—Dr. Charles Dingee has been appointed city physician of Burlington, vice Dr. Edmund Eastwood.——Dr. Jacob Hempstead, Paterson, succeeds Dr. Anthony as house physician to the Muhlenberg Hospital, Plainfield, October 1.——Dr. William C. Boone, who resigned from active service on the medical board of the Muhlenberg Hospital in July, after a service of more than 25 years, was appointed consulting physician of the hospital, September 10.——Dr. J. Edward Blair, Burlington, was operated on for appendicitis at the German Hospital, Philadelphia, September 3.——Dr. Albion C. Christian, Irvington, has returned from a trip to the Pacific Coast.

PENNSYLVANIA.

Typhoid Fever in Pittsburg.—Twenty new cases of typhoid fever were reported to the Pittsburg bureau of health for the 24 hours ended at noon, September 26.

Personal.—Dr. Joseph H. Bittinger has been chosen president; Dr. John D. Keller, vice-president, and G. Harry Jordy, secretary and treasurer, of the Physicians' Club of Hanover.——Dr. William J. Hanlon, Mount Carmel, is confined to his house on account of illness.

Must Secure Burial Permits.—The board of health of Chester has decided to take legal steps against funeral directors who do not secure burial permits before interring bodies. It is said that a number of physicians of Chester fail to issue necessary certificates, especially in cases of death from diphtheria.

Chi Club Organized.—A number of physicians of Scranton and vicinity, graduates of the Medico-Chirurgical College of Philadelphia, organized a "Chi Club," September 20. The following officers were elected: Dr. Gilbert D. Murray, Scranton, president; Drs. Charles P. Stackhouse, Wilkesbarre; William B. Stricker, Nanticoke, and Frank J. Wagner, Carbondale, vice-presidents, and Dr. Thomas Monie, Archbald, secretary and treasurer.

Philadelphia.

August Vital Statistics.—The report of the division of vital statistics for the bureau of health for August shows that 1,905 deaths and 2,604 births were reported.

Druggist Fined for Selling Morphin.—William Frost, a drug clerk, who was arrested, charged with selling morphin without a prescription and without placing a poison label on the bottle, was found guilty and sentenced to pay a fine of $50.

Pure-Food Prosecutions.—Last week, for the first time since the inauguration of the pure-food crusade by Dr. Warren, several cases were tried in the quarter sessions court. Ten men accused of food adulteration pleaded guilty before Judge Martin and were each fined $50 and costs.

Personal.—Dr. Hobart A. Hare narrowly escaped serious injury by being thrown from his automobile in a collision with a trolley car, September 26.——Dr. Howard T. Karsner sailed for Europe, September 28.——Drs. Harris A. Slocum, Ralph W. Seiss, George B. McClellan, A. Allison O'Daniel, James M. Anders and John C. Heisler have returned from Europe.

Physical Culture in the Public Schools.—The superintendent of the city schools, in his report to the board of education, recommends and approves systematic physical culture in the public schools throughout the city. His report provides for the appointment of a director at $2,500, and as many assistants at $1,000 a year each as may be needed. Dr. Brumbaugh mentioned that under the act of March 8, 1901, such instruction is obligatory.

Health Report.—The total number of deaths reported for the week ended September 29 reached 439. This is an increase of 17 over the number reported last week, and an increase of 35 over the number reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 17; pertussis, 8; diphtheria, 13; consumption, 52; cancer, 18; apoplexy, 23; heart disease, 35; acute respiratory disease, 38; enteritis, 56; appendicitis, 6; Bright's disease, 27; congenital debility, 14; suicide, 3; accidents, 15, and marasmus, 6. There were 180 cases of contagious disease reported, with 30 deaths, as compared with 190 cases and 20 deaths reported in the preceding week.

Medical Inspection for August.—The report of the division of medical inspection of the bureau of health for the month of August shows that the number of inspections made, excluding schools, was 3,416, and that 494 fumigations were ordered. Eighteen cases were examined for special diagnosis; 182 cultures were taken, 106 injections of antitoxin were administered and 473 vaccinations were performed. In the division of milk inspection 5,584 inspections were made, 107,760 quarts of milk were examined and 40 quarts condemned. The report of the bacteriologic laboratory shows that 606 diphtheria cultures were examined, 552 Widal reactions were performed, 669 quarts of milk were examined, and 92 specimens of sputum. The laboratory supplied 1,708,500 units of antitoxin.

College Openings.—The annual opening of Jefferson Medical College for the sessions was held in the college laboratories, September 24. The introductory student address was delivered by Prof. Howard Hansell.——All the departments of the Medico-Chirurgical College were opened for the session of 1906-07 with the usual exercises, September 25. The annual introductory address was delivered by Dr. John V. Shoemaker, who spoke on "The Scientific Foundation of Modern Treatment of Disease."——The one hundred and sixty-seventh annual session of the University of Pennsylvania began September 28. The opening exercises were held in the new medical laboratories, and the opening address was delivered by Dr. Charles Frazier, dean of the medical department.——The fifty-seventh annual opening exercises of the Woman's Medical College of Pennsylvania were held in the college building, September 26. Dr. Clara Marshall, the dean, made the introductory address, and the annual oration was delivered by the professor of pathology, Dr. Aloysius O. J. Kelly.

TENNESSEE.

Hospital Addition.—An addition is to be erected to the St. Thomas Hospital, Nashville, increasing the capacity of the hospital about 60 per cent., at a cost of $60,000.

Communicable Diseases.—The opening of the public schools of Gallatin has been suspended on account of diphtheria.——An epidemic of typhoid fever has developed in the east section of Owingsville, where thirty cases are said to exist.

To Hunt Down Illegal Practitioners.—The Dickson County Medical Association, at a recent meeting, resolved to bring to justice every individual in Dickson County endeavoring to vend or practice medicine contrary to the statutes of the state.

Personal.—Dr. J. M. Trout, Jackson, is in New York City on his way to Europe, where he expects to remain about a year.——Dr. Frank S. Raymond, Memphis, president of the Memphis Board of Health, has applied for leave of absence on account of ill health.

College Opens.—Meharry Medical College, the Department of Medicine of Walden University, Nashville, opened for its thirty-first annual session, September 5. The faculty has been reinforced by the addition of Prof. C. H. Elliot, who will take charge of the chemical laboratory.

Academy Incorporated.—The Nashville Academy of Medicine was incorporated September 5 by Drs. Marvin M. Cullom, G. C. Savage, Lucius E. Burch, William R. Sifford, Holland M. Tigert and Charles A. Robertson. The purpose of the organization is said to be interchange of ideas and a general furtherance of the general science of medicine.

TEXAS.

Smallpox.—Four cases of smallpox have been discovered near Tyler. The patients have been isolated and are under quarantine.

Asylum Completes Year Without Deficit.—The superintendent of the Northern Texas Hospital for the Insane, Terrell, reports that for the sixth consecutive year, the business of the institution has been so managed that the appropriations made by the legislature have been sufficient to meet the expenses of the institution.

Physicians Must Register.—At a meeting of the San Antonio Board of Health, it was decided to enforce the old ordinance requiring every physician in the city to register at the office of the board. The purpose of the ordinance is to make it possible for the board to find at any time if men not qualified practice or pose as physicians.

Hospital Notes.—It is generally agreed that the new hospital for the Santa Fe system is to be located at Temple.——The Alpha Sanitarium, Llano, for consumptives, has materially increased its accommodations for patients, and on August 25 it opened its new and enlarged quarters.——A sanatorium to cost $250,000 is to be erected in Shannon.

City Chemist Needed.—At a meeting of the Dallas Medical and Surgical Society, held September 8, resolutions were unanimously adopted that the society realizes the importance of the movement now being carried on by the city health officer to inspect foodstuffs offered for sale in Dallas, and urging the establishment of a department, to be in charge of a competent chemist, whose duty it shall be to examine such foods as may be brought before him, analyzing and reporting on them.

Personal.—Dr. Joseph Gilbert, Austin, physician of Travis County, has resigned to become chief medical officer at the Agricultural and Mechanical College, and assumed his duties at that institution September 8.——Dr. Herbert F. Sterzing, Austin, has been appointed physician for the city of Austin and Travis County, vice Dr. Joseph Gilbert, resigned. Later on the county commissioners appointed Dr. George S. Beaty, Sprinkle, as county physician.——Drs. Margaret Gilbert and Horace Holiday have been elected assistant physicians to the State Lunatic Asylum, Austin, vice Dr. James H. Eastland and Louis H. Kirk, resigned.

VIRGINIA.

Cocain Sellers Fined.—Richard Hunycutt and John Boush, colored, were each fined $100 and costs in the Norfolk police court September 10 on the charge of selling cocain.

Personal.—Dr. J. N. Cranshaw, Fredericksburg, has been appointed physician in the University Hospital, Charlottesville.—Dr. Herbert O. Forbes, Jetersville, broke his arm while playing baseball September 15.

Hospital Fire.—A fire early in the morning of September 10 in Newport News General Hospital for a time threatened peril to the inmates. A panic was averted by the fire chief of Newport News, who had been operated on for hernia in the hospital a few days before, and who directed the work of the firemen.

Health Department Ordinance.—The ordinance revision commission of Norfolk will submit to the council at its meeting in October the following recommendations: That there shall be a health commissioner, who shall act as the head of the health department, at a salary of $2,500 per annum; that he shall have one assistant, who shall be head of the sanitary force of the city, and act as office man, at a salary of $1,800 per annum, and that he shall have two assistants who shall act as physicians to the city poor, at a salary of about $1,200 each per annum.

WASHINGTON.

Typhoid Fever at Camp Tacoma.—Typhoid fever is said to have been epidemic at Camp Tacoma. Up to September 4, 33 patients had been sent to the Vancouver barracks for treatment, and the same number had been treated in the field hospital.

Typhoid Fever.—An unusual number of cases of typhoid fever are in the hospitals of Spokane at present, it is said. St. Luke's Hospital has 16 cases; the Sacred Heart Hospital about 20; Washington Hospital, 10, and the Deaconess Hospital, 8. The health officer states that almost all the patients contracted the disease out of town.

Tuberculosis Society Organized.—At the meeting of the Washington State Medical Association the Washington Association for the Relief and Prevention of Tuberculosis was organized, with the following officers: President, Dr. Clarence A. Smith, Seattle; vice-presidents, Drs. Frank H. Luce, Davenport; Wilson Johnston, Colfax, and Elmer E. Heg, Seattle, and secretary, William R. M. Kellogg, Seattle.

Health of King County.—According to the report of the county health officer, Dr. Bartholomew E. Hoye, Auburn, from Dec. 1, 1904, to Sept. 1, 1906, there have been 100 cases of scarlet fever, 121 of diphtheria, 82 of typhoid fever and 22 of tuberculosis in King County outside of Seattle. Three small epidemics of scarlet fever have been reported, one from North Bend, one from Woodville and one from South Park.

WISCONSIN.

Maternity Moves.—The Milwaukee Maternity Hospital and Dispensary Association has moved into its new quarters at 424 Vliet Street.

To Build Sanatorium.—The state board of control has appointed J. E. Hoyt superintendent of construction of the Wisconsin Tuberculosis Sanatorium, to be erected at Wales, Waukesha County.

Hospital for Janesville.—The physicians of Janesville met at the office of Dr. Samuel B. Buckmaster, September 1, to consider the proposition of establishing a hospital to be operated in Janesville under the management of the Sisters of Mercy.

College Opens.—The opening exercises of the Milwaukee Medical College were held September 17. Addresses were made by the president, Dr. William H. Earles, and others, who made references to the university negotiations, the establishment of which are now pending.

Epidemic Diseases.—Bayfield is said to be experiencing an epidemic of typhoid fever. About 15 cases are reported and the disease is thought to have been caused by bad water.——In Lodi 5 cases of typhoid fever have been reported.——On account of 2 cases of diphtheria at Wauwatosa, three grades of the public schools have been closed.——Smallpox is reported to have broken out in Cambria, where 10 cases have appeared. The church conference which was to have been held in Cambria has been transferred to Portage on this account.——Smallpox is reported at McDill, where 2 cases have appeared.

Personal.—Dr. James S. O'Brien, Milwaukee, has been elected president of the board of directors of St. Mary's Hospital; Dr. George D. Ladd, vice-president, and Dr. George W. Fox, secretary.——Dr. Joseph P. McMahon, Union Grove, has sailed for Europe.——Dr. Guy C. Bowe, Fond du Lac, has discontinued practice in the state and will remove to Ashland, Va.——Dr. Thomas W. Nuzum and wife, Brodhead, have returned from Europe and will locate in Janesville.——Dr. G. Fred Colter, Marinette, has been reappointed a member of the advisory board of the State Tuberculosis Sanatorium.

GENERAL.

American Electro-Therapeutic Association.—The sixteenth annual meeting of this association was held in Philadelphia, September 18-20, under the presidency of Dr. Charles K. Mills, Philadelphia. The name of the association was changed to the Physico-Electro-Therapeutic Association, and the following officers were elected: Dr. Morris W. Brinkmann, New York City, president; Dr. J. D. Gibson, New York City, and Mihran K. Kassabian, Philadelphia, vice-presidents; Dr. Albert C. Geyser, New York City, secretary, and Dr. Richard J. Nunn, Savannah, Ga., treasurer (re-elected), and Drs. William B. Snow, New York City; Fred H. Morse, Boston, and Francis B. Bishop, Washington, D. C., executive council. The association will meet in Jamestown, Va., in 1907.

Hospital Superintendents Meet.—The Association of Hospital Superintendents held its eighth annual meeting in Buffalo, September 18-21. After the meeting had been called to order by the president, George T. Ludlam, New York City, Mayor J. N. Adam welcomed the association to Buffalo, and Dr. George H. M. Rowe of the Boston City Hospital responded. In his annual address the president declared that the hospital as an institution had not kept pace with the development of the country, and that in an organization where all the hospitals in the country are bound together by common ties, would be the greatest hope in expansion. He suggested that the name of the association be changed from the "Association of Hospital Superintendents" to "The Hospital Association," in order to allow the admission to membership of managers, trustees and representatives of medical boards, in addition to superintendents. The following officers were elected: President, Dr. Renwick R. Ross, Buffalo General Hospital; vice-presidents, Superintendent Curtis, St. Luke's Hospital, Chicago; Superin-

tendent W. W. Kenny, Victoria General Hospital, Halifax, N. S., and Dr. Alice M. Seabrook, Woman's Hospital, Philadelphia; secretary, Superintendent George J. Bailey, Jefferson Medical College, Philadelphia, and treasurer, Superintendent Asa Bacon, Presbyterian Hospital, Chicago. The next meeting of the association will be held in Chicago, Sept. 19-21, 1907.

CANADA.

School Medical Inspection in Montreal.—School inspection in Montreal has become an actual fact. Twenty-one inspectors have recently been appointed from among the medical fraternity of that city.

The consumption of Liquors and Tobacco in Canada.—During the year ending June 30, 1906, the *per capita* consumption of alcoholic liquors and tobacco in Canada was as follows: Gallons, spirits, 0.927; beer, 15.660; wine, 0.698; tobacco, pounds, 2.991. There was a decrease in the consumption of spirits and an increase in that of beer, wine and tobacco.

Medical Schools Open.—The inaugural address in connection with the opening of the Medical Faculty of McGill University was delivered September 18 by Dr. R. F. Ruttan, professor of chemistry in McGill. This is the seventy-fifth session.——The Manitoba Medical College reopened the first week in October. ——The Medical Faculty of Toronto University commenced work for the session October 1.

Personal.—Sir William Broadbent, who has been in Canada for the last six weeks, has returned from a trip across the continent, and has sailed for home.——Dr. Gerin Lajole, formerly a practitioner in Montreal, but for the past six years in France, has been appointed a surgeon-major in the French army.——Dr. J. L. Robinson, Montreal, has been appointed medical superintendent of the Vancouver General Hospital.

Hospital News.—During the three months ending June 30, 1906, 881 patients were treated in the Montreal General Hospital. There were 59 deaths. In the out-door departments there were 10,893 consultations. Dr. F. J. Shepherd was elected to fill the vacancy on the committee rendered vacant through the death of Dr. Craik.——The annual report of the Toronto General Hospital for 1905 has just been issued. In it is incorporated a report of 110 cases of typhoid fever treated in the institution from Jan. 1 to Dec. 31, 1905. Seventy-four per cent. showed rose spots; the spleen was enlarged in 54 per cent. The Widal reaction was positive in 76 per cent. before the seventh day of admission. The diazo reaction was obtained in 52 per cent. of the series. Nine patients died, a percentage of 8.2. Relapses occurred in 14 cases. Lobar pneumonia occurred in 7 cases; bronchopneumonia in 1 case; pleurisy with effusion in 2; bronchitis in 12; perforation of the bowel in 2 (both treated with purgatives); phlebitis in 11; convulsions in 2.

FOREIGN.

Institute for Testing of New Drugs.—The "George Speyer House," an institution erected and endowed by the widow of a Frankfurt capitalist, was dedicated with much ceremony September 3 at Frankfurt a. M. The institution is to be under the supervision of Professor Ehrlich, and is designed for the investigation and testing of new drugs.

The Schaudinn Medal.—An endowment has been raised for the purpose of presenting a medal every two years for the most prominent works in the domain of microbiology. The medal will be known as the Fritz Schaudinn medal, and will be awarded on the anniversary of Schaudinn's death, at the Institute for Ship and Tropical Diseases, at Hamburg, the scene of Schaudinn's last labors. The medal will be awarded irrespective of nationality.

Diploma of Public Health in Australia.—The faculty of medicine of the University of Sidney, according to the *Lancet*, has recommended the adoption of by-laws and regulations for a diploma of public health which will testify to the candidate's proficiency in all branches of study, scientific and practical, necessary for the proper performance of the duties of health officer. The examination will be in two parts: (1) The general principles of sanitary science; and (2) state medicine and the applications of pathology and sanitary science to public health.

Hallucinations of Chloroform.—A Paris physician who had performed an operation under chloroform on a housemaid was accused by the latter of taking improper liberties with her mistress, as she saw while coming out from under the influence of the chloroform. The medicolegal experts, Professors Brouardel and Debove, testified that chloroform was liable to induce hallucinations, not only during the anesthesia, but even after partial awakening. The French court accepted this testimony and ruled out the housemaid's evidence in a recent divorce case.

New Sanitary Service for India.—It is reported that in view of the continuance of the epidemics of plague, cholera and smallpox in India and the heavy perennial mortality from malaria, that the government has decided to create an entirely new service whose duty it will be to safeguard public health. According to the *British Medical Journal*, Lord Kitchener is greatly concerned by the high percentage of preventable diseases in the army and has instituted a system of lectures on sanitation, to be delivered during the cold season in every military station in India by specially selected officers of the Royal Army Medical Corps.

A "Patent Medicine" Before the German Courts.—The proprietor of a cure for baldness and the business manager of a local paper at Hanover, Germany, were recently sued for publishing extravagant claims in regard to the virtues of the remedy known as *eau de merveille*. The *Allg. med. Ct.-Ztg.* quotes an account of the proceedings to the effect that the chemical experts testified that the 50 cent bottle contained merely alcohol and water with some aromatic oils, the cost of which could be only a few pennies. The proprietor, while vaunting the efficacy of the remedy, was nonplussed by the inquiry why he had not used it on his own bald head. The two defendants were fined $5 each.

Change Desirable in Meeting Places.—There is considerable discussion just now in Germany as to the place where the annual congress of internal medicine shall be held. An effort is being made to have the members vote to have the congresses held invariably at Wiesbaden, instead of, as at present, at Wiesbaden only every second year, and the intervening years at different places. Much ink is being used to proclaim the importance and benefits of holding the congresses at various points so as to give all the physicians occasionally a chance to have the congress in their immediate neighborhood, and save them the time and money of a long journey to the meeting place, besides the other advantages of change.

Epileptic Colony in Scotland.—The Colony of Mercy for Epileptics, in connection with Quarrier's Homes at Bridge of Weir is now ready for occupancy. One house has been opened and is occupied by 12 colonists, all young men. It is proposed to fill up the houses gradually as suitable applicants are found. Only thoroughly sane young men who are capable of taking part in healthy outdoor garden and farm work will be admitted to the colony. Each colonist is expected to provide himself with clothes, and to pay a minimum sum of about $2.50 a week toward his expenses. It is not expected that the colony will be self-supporting, but as funds become available it is intended to erect buildings for women and children.

The Wanderings of a Leper in Europe.—A recent similar occurrence in the United States lends interest to the statement in an Austrian exchange that a man of 48, in the early stage of leprosy, recently arrived at the Austrian frontier on his way to his home in Roumania. Passage through Austria was not allowed, and he was sent back, with a car to himself, the doors locked and sealed. The Bavarian railroad returned the man to the place where he had taken the train, Frankfurt a. M., where he was transferred to the city hospital and isolated. It is proposed to send him back to London, where the disease was first diagnosed and where he started on his journey. Our exchange queries in conclusion: "What country will finally have to keep him?"

Health Board Warns Against a Fake.—The local board of health at Carlsruhe, Germany, has recently published a notice in regard to an electric battery advertised by "Professor Keith-Harvey of London" in the local papers as a sure cure for deafness. It describes the absurdity of expecting that deafness can be cured by "a mild galvanic current conducted to the muscles of the ear," even if the advertised battery is all that it claims to be. It also calls attention to the printed circular letter sent out by the advertisers in reply to applicants, although they advertise "a careful individual diagnosis made from the symptoms described in each case." The notice closes by warning explicitly against the "swindle gotten up solely for the purpose of obtaining money from the credulous."

Much Radium in Vienna.—Some time ago the Vienna Academy of Sciences received by official grant 10,000 kilograms of the uranium ore from which radium is produced. It was sent to the academy from the government mines at Joachimsthal for purposes of scientific research. The radium derived from this raw material has been accumulating until now the academy has on hand pure radium to an amount worth fully a quarter of a million dollars, according to the present market value of radium. It is not to be sold, but will be distributed among scientific bodies for purposes of research. The Austrian authorities have decided to erect a special laboratory at

Joachimsthal for the production of radium salts on the spot. As recently already mentioned by our Vienna correspondent, a health resort is to be opened there to take advantage of the radium emanations in the waters.

Behring's Tulase.—The first report on the treatment of patients with tulase has just been published in the organ of the International Antituberculosis Association, *Tuberculosis*. The remedy is, for the present, given only to a few clinics which have sent one of their assistant physicians to Behring's institute at Marburg to take a three months' course in preparatory training in the use of the remedy, and have agreed to keep records according to a prescribed system. The experiences to date have demonstrated that the tulase can be administered subcutaneously, intravenously or by the mouth. It is given to infants in milk. It is not claimed to be a remedy that will cure already existent tuberculous processes, but it is said that administered to the young, it will prevent the development of tuberculosis, and will act on an existent tuberculous process in such a way that the natural tendency of the lesion to heal will not be interfered with by renewed tuberculous infection. The tulase is given in minute doses, and for diagnostic purposes can be substituted for tuberculin. Behring's first announcement in regard to his tulase was mentioned in these columns on page 869.

How They Humbug the Dear People in Italy.—A correspondent, Dr. F. E. Sondern, New York, writes from Geneva, Switzerland: "While in a small Italian town some days ago, the enclosed circular was being distributed." The circular is in Italian and reads:

> A free visit will be made by one of the 20 professors of the American Medical Association residing in Milan, on August 25, at Verbano Restaurant, from 8 till 2 p. m., at Stresa. These professors cure by the homeopathic method, acknowledged to-day to be the best for the cure of all diseases, especially the most obstinate, chronic cases. The remedies used for the cure of these acute and chronic diseases are imported directly from the United States of America and from Germany, and are sent out by our house in Milan, in conformity with the law of the realm. With this new scientific system of treatment, thousands of cures have already been obtained in Italy in acute and chronic diseases, many of them declared incurable by renowned professors in Italy, and with little expense, as we can prove by the thousands of letters from grateful patients, which we will take pleasure in showing to whoever will apply at this office.

Then follow names and testimonials of some among the alleged 4,320 patients that have been cured. The circular is signed, "American Medical Association, Milan-Palazza, Genova 3, Milan."

Relief of Australian Dependent Children.—The report of the State Children Relief Board of New South Wales for the year ending April 5, 1906, shows 7,036 children dependent on the state, being about 0.5 per cent. of the population. Of these a little over one-half are placed in homes apart from their mothers, with an average of three children to two guardians. This secures, as far as possible, the individual attention of the foster mother. The maximum number of children in a home is fixed at three, except under peculiar circumstances. The care of the children is supervised by visitors, both salaried and voluntary, in such a way that each child receives a visit on the average twice a year. Cottage homes having the average capacity of twenty are provided for invalid children who are not sick enough to be placed in a hospital, but need special nursing and attention. These homes are under the charge of experienced women, who act as nurses under medical supervision. Deserted wives and widows are allowed to board their own children under supervision. Statistics show that while the aggregate of the women is now decreasing each year, the proportion of deserted wives to widows is steadily increasing. Older children are apprenticed, the board collecting their wages and depositing them to a fund out of which the children are paid their share partly on completion of the indentures and the balance when the child has reached the age of 21 years. The board considered it necessary to oppose the proposition of a milk wagon drivers' association to deliver milk but once a day on holidays, on account of possible injury to the health of children, and was successful in defeating the proposed action.

LONDON LETTER.

(From Our Regular Correspondent.)

LONDON, Sept. 8, 1906.

The Milk Supply.

The problem of a pure milk supply greatly exercises those interested in public health. Under existing conditions there is undoubtedly gross neglect of sanitary precautions and cleanliness. The much advertised precautions such as washing hands and udders are seldom carried out, and the milk is polluted with cow dung and other dirt. "If canned meat has killed its thousands, milk has killed its tens of thousands.," declares a health officer. It is computed that there are over 4,000,000 milch cows in the United Kingdom, and that the average yield of milk per cow per annum is 420 gallons. Thus the total yield is about 1,700,000,000 gallons. As milk is sold for fourpence a quart, the total cost per annum amounts to about $570,000,000. In only a minority of cases are the conditions of this enormous industry above suspicion. The question of transit also presents difficulties. Almost all the milk consumed in London comes from such distances that it is from 12 to 24 hours old before it is delivered. The milk taken from cows at 4 a. m. arrives only in time for the afternoon delivery, when only half of it is required. The remainder is kept by the dairyman to be mixed with the afternoon supply for delivery next morning. Thus the morning supply is a mixture of milk more than 12 hours old with milk more than 24 hours old. But something still worse may happen. The fact that a cow gives a richer milk in the smaller afternoon milking than in the larger morning milking leads unscrupulous dealers to mix separated milk with the richer article. This can be seen going on almost any day at the large railway stations. When the supply is larger than is required the surplus is allowed to remain at the station, to be manipulated day by day with further supplies until it can be advantageously disposed of—perhaps three or four days after milking. Acting on the recommendation of the public health committee, the progressive London County Council has determined to seek in the next session of parliament several important powers for dealing with matters of sanitation and public health. The most important relate to the supervision and regulation of the milk supply of London. Power will be asked to enable the council to prohibit the supply of milk from a dairy if the health officer is of the opinion that infectious disease is caused or likely to be caused by the consumption of such milk. To enable necessary supervision to be carried out the council seeks power to require dairymen to supply lists of their customers and the sources from which their milk supply is obtained, and power to impose penalties for selling milk from tuberculous udders. It is also proposed to compel dairymen to report cases or suspected cases of tuberculosis of the udder and to isolate cows suffering from this disease. Power is sought to enable the council to take samples of milk arriving at any railway station in London and elsewhere and to deal with milk which is found unfit for consumption. With regard to milk for infants, the council intends to seek authority to enable the various local metropolitan borough councils to provide and to sell milk for the food of infants. This has been done with good results as to infant mortality by some local councils, but the expenditure is illegal.

Medical Education in London.

The high standard demanded by the University of London for the degree of doctor of medicine causes only a small minority of the London students to seek to obtain it. The majority content themselves with obtaining a license from the College of Physicians and Surgeons. This is sufficient for the purpose of practicing, but the licensee is not strictly entitled to the title of doctor, though it is freely given to him by the lower and lower middle classes. Among the upper and educated classes he is termed "Mr." and is under some disadvantage as compared with those who have obtained the degree of doctor of medicine from a university, and who are correctly styled "doctor." This degree is much more easily obtained in the provincial, Scotch and Irish universities than in London. Consequently there is a tendency of students to flock to the latter to the neglect of the London schools, and yet the London hospitals provide opportunities for the study of clinical medicine which are unequaled in the British Isles. The subject is discussed by the *Lancet* in its annual address to students. Last year the number of students at the London medical schools was rapidly dwindling. "By so much," says the *Lancet*, "as the work done in the wards and out-patient departments of the London hospitals is not utilized for educational purposes is our country placed at a disadvantage compared to others—we are wasting our opportunities."

The Study of French and German for Medical Students.

Professor Osler has issued the following memorandum to the Oxford undergraduates regarding the importance of the study of French and German: "During your undergraduate days you should become familiar with the French and German languages. To do this one of the best ways is to read small French and German text-books, of which (with the advice of colleagues) I enclose a list. Half an hour a day will soon give you the necessary facility in translation. Later in your course get into the habit of reading, in the Radcliffe Library, a French and a German periodical. You will in this way

become familiar with foreign literature, which has ever been deemed a necessary equipment of a cultivated physician." The following list of French and German books is recommended to undergraduates taking science courses preliminary to medicine, and to students of anatomy and physiology. French—Aubert: "Phénomènes de la Vie." Ditte: "Premières Notions de la Chimie." Joubert: "Traité d'Electricité." Meric: "Dictionnaire des Termes de Médecine Franç.-Anglais." German—Born: "Compendium der Anatomie des Menschen." Reynolds: "Leitfaden zur Einführung in die Experimental-Chemie." Fiedler and Sandbach: "A First German Course for Science Students." Osbonne: "German Grammar for Science Students." Schenk und Gurber: "Leitfaden der Physiologie des Menschen." Lang and Abrahams: "German-English Dictionary of Terms Used in Medicine and the Allied Sciences."

Central Emergency Fund of the British Medical Association.

The British Medical Association has for some time been engaged in combating the evils of contract practice. Many clubs take advantage of the severe competition which prevails in the profession to pay exceedingly inadequate fees to their medical officers or, in the language of the trade unions, to "sweat" them. No matter how low the remuneration, the clubs have usually been able to obtain a physician to fill a vacancy caused by dissatisfaction of the previous holder of the appointment. The British Medical Association, however, has put a check on this unlimited competition by arranging concerted action of the profession. The local branches determine whether the conditions of an appointment are satisfactory and if not, endeavor to prevent any physician from taking it. In the advertisement pages of the *British Medical Journal* warning notices are inserted asking physicians not to apply for any appointment without first communicating with an officer of the association, whose name is supplied. At the places mentioned some dispute is in progress, usually in connection with some form of medical contract work. Any physician who thinks of applying for the vacancy is put in possession of the facts. The current number of the *British Medical Journal* contains as many as 19 such notices. The association has now gone a step farther. Last year the central council passed a resolution providing that a central emergency fund for dealing with disputes in case of contract practice and otherwise, under the management of the medico-political committee, be created by voluntary subscription. The following scheme of the fund has now been prepared: 1. The fund is created by voluntary subscription to assist members of the profession in various parts of the country in maintaining the interests of the profession against organized bodies of the community. 2. All members of the profession are invited to contribute. Any contribution may be marked for use in specified disputes, or for application to special methods of carrying on the objects of the fund, and when not so marked shall be deemed to be given for disposal at the discretion of the medico-political committee. 3. The fund may be applied as follows: (a) By a grant or grants to any individual practitioner to assist him in maintaining any position in which the association shall have decided to support him or to compensate him for losses which he shall have incurred through taking action approved by the association. (b) By a grant or grants to any division or branch of the British Medical Association, for its assistance in defraying expenses incident to the conduct of local disputes falling within the scope of the objects of the fund. (c) By expenditure under direct supervision of the medico-political committee for any action which the committee may deem necessary or advisable for the promotion of the general objects of the fund.

LONDON, Sept. 15, 1906.

First Report of the Expedition to the Amazon of the Liverpool School of Tropical Medicine.

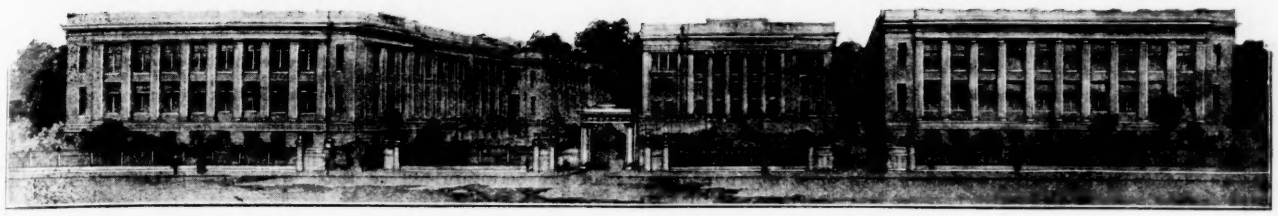
This expedition left its headquarters at Manaos, Brazil, and proceeded up the River Amazon for the purpose of investigating the distribution of disease and of yellow fever in particular. Iquitos in Peru was reached on Dec. 31, 1905. A stay of three months was made there and a report was presented to the Peruvian government. Iquitos lies along a high bank overlooking the river Maranon and behind it are swamps. The roads are in a wretched state—undrained, full of ruts and holes—and in wet weather become almost impassable. The town, especially along the river bank and near the swamps, is noted for the number of mosquitoes. Houses near the river are never free from them and unless wire screens are used the situation becomes intolerable after dusk. Neither water reservoirs nor privies are protected from mosquitoes; stegomyia and culex were frequently found breeding in both. As is usual, stegomyia was found to breed freely in the various discarded pots and pans, bottles and barrels which accumulate in tropical establishments. The sanitary condition of the town is very bad. Drains for the most part are mere trenches cut in the sandy soil. There is no publie water supply; water is obtained from springs or from cisterns sunk in the ground in which rain water is stored. There is no proper system of sewage disposal. The poorer classes defecate indiscriminately in every part of the town, and fecal contamination of drinking water is common. *B. coli communis* and eggs of *Ankylostoma duodenale* were frequently found in the water. There is no system of garbage disposal; household refuse is deposited almost anywhere. Notwithstanding its insanitary condition, Iquitos is not exceptionally unhealthy. The prevailing diseases from January to March are whooping-cough, measles, bronchitis and infantile diarrhea among children; gastritis, gastroenteritis, bronchitis and malaria among adults. Other diseases seen were leprosy, amebic dysentery and tuberculosis. The expedition had hoped to see "*romito negro*," which is locally considered to be distinct from yellow fever, but no cases of either occurred. From the information given by the local physicians they appeared to be the same disease. To ascertain the prevalence of malaria in the blood of the general population, 764 persons were examined. In 98 the malignant tertian parasite was found. The majority of those infected were Indians and men employed in launches along the rivers. Of 97 children between the ages of 4 and 14, only 2 were infected. The hemoglobin showed a low average in Indians and the poorer classes, varying between 45 and 72 per cent., and in the better classes between 72 and 80 per cent. The explanation of this marked anemia is believed to be ankylostomiasis. Practically all the native children are infested with the parasite. An accompanying infection with ascaris lumbricoides or various teniæ was frequently observed. Among the domestic animals at Iquitos the following diseases were observed: In cattle piroplasmosis, malignant edema and perhaps quarter evil; in swine trichinosis; in poultry chicken cholera and fowl diphtheria; and in rats *Trypanosoma lewisi*.

Glycerinated Calf Lymph.

A preliminary report has been made to the local government board by Drs. F. R. Blaxall and H. S. Fremlin on experiments undertaken to determine whether or not the active agent of vaccine lymph could withstand, without loss of potency, temperatures below freezing point. Afterward the doctors were directed to ascertain whether sustained subjection of glycerinated calf lymph to a temperature of 5 degrees (C.) below freezing point could be used to maintain a reserve of lymph without loss of activity. General experience and numerous experiments have shown that the agents most productive of weakness and failure in glycerinated lymph are age and heat. Thus crude lymph loses its potency if subjected for five minutes to a higher temperature than 57.5 C. Glycerinated lymph becomes inert if kept at 37 C. for more than thirty-six hours. It was anticipated that if the everyday deleterious influence of heat on lymph could be prevented the loss of activity which is associated with age could be diminished and a method of storage attained. Experiments were commenced in January, 1900. The lymph was exposed to various low temperatures, including that of liquid air (—180 C.). The following conclusions were reached: 1. Glycerinated calf lymph can survive a temperature of 180 C. below freezing point for a considerable time without loss of potency. 2. It can be retained in a cold store at —5 C. for a year without diminution of potency, whereas stored for the same time at 10 C. it loses activity to a considerable extent. 3. Sustained subjection to cold appears not to be injurious.

The Overlying of Infants.

The overlying of infants is the cause of more than 1,600 deaths annually. A meeting has taken place between six members of the National Society for the Prevention of Cruelty to Children, three representatives of the Coroner's Society and three members of the British Medical Association. The subject was thoroughly discussed, and it was decided to take some step toward amending the act for the "Prevention of Cruelty to Children." The form of the amending bill and the steps to be taken to insure its acceptance by the legislature were left for settlement at a later date. It seems probable, however, from what passed at the meeting, that the death from suffocation of a child under the age of 3 years as a consequence of its sleeping in the bed of its parents or other adults, as also the death of a child under the age of 10 years from burning or scalding from being allowed access to an unprotected and lighted open fireplace, *ipso facto*, will be made evidence of neglect in the sense in which the term is used in the act mentioned.



THE HARVARD DEDICATION.

New Buildings of Harvard Medical School Dedicated September 25-26.

The ceremonies attending the formal opening of the new medical laboratories of Harvard University, which were described in THE JOURNAL, July 7, page 50, have more than a local interest. They mark the completion of an important step in the development of a scheme in medical education and instruction not hitherto attempted in this country. The Harvard faculty believes that a medical school should be something more than a place of instruction. It believes that the student in medicine should be so trained and drilled in research methods that it becomes the basis of all his work. This view is strongly reflected in the magnificent buildings just dedicated. In these four great laboratories every facility has been provided for instruction, training and drilling of each student individually, both as to the essentials of past research, as well as in the methods by which those fundamentals were acquired. While the laboratory methods are emphasized strongly in this celebration, they are but the nuclei about which hospitals are to be grouped at no very distant date. Boston offers annually a hospital clinic of over 15,000 ward patients and more than 130,000 ambulatory patients. In the care of this great number of afflicted persons the Harvard medical faculty has almost unrestricted facilities for studying and demonstrating disease in its various forms.

A Medical University.

In order that the greatest amount of advantage possible to suffering humanity, as well as to medical science and instruction may result from a closer union of the laboratory and the hospital clinic, these new laboratories are to be an integral part of a great hospital teaching medical center—a medical university. The hospital of the Good Samaritan is already established on the site, and the remaining fifteen acres are to be used for the Harvard Dental School, an infant's hospital, children's hospital and a large general hospital, all to be under the jurisdiction of the corporation of Harvard University. The whole plant is to form a part of a general architectural scheme, of which the Fenway is the center. To meet this design the administration building and the four laboratories face a quadrangle 215 feet wide and 480 feet long, which is the continuation of a proposed boulevard extending to the Fenway.

Plan and Construction of Buildings.

All these buildings are of white marble, and are designed in a simple, classic style, an adaptation from the Greek. The administration building, facing the open court, is raised on a high terrace, which gives a setting pleasing and majestic. The approach is by means of a broad flight of steps from the terrace to the front portico of the building, from which rise six ionic marble columns, each over fifty feet high. The interior of this building, on the ground floor, is treated with marble floors and wainscoting and columns, etc., in keeping with the general design of the exterior. The right wing of this floor is arranged for the administrative offices of the school, the faculty room, committee rooms, and others. The left wing contains rooms for students and alumni, a reading room, and a smoking room. Over the students' room is an amphitheater, with entrance so arranged that the students enter from the second floor to the upper tier of seats, while the lecturer with his lecture material, is admitted from an intermediate floor below. This lower floor has a connected preparation room, to which the elevator runs from the receiving room and museum, so that specimens may be transported directly on movable tables. The seats in this amphitheater, as in all the other class rooms, are especially designed with movable seats and writing tablets. Every facility is provided for illustrating by means of lantern projections. The remaining portion of the second floor in this building is divided into class rooms.

The Warren Museum.

The Warren Museum occupies the entire upper portion of the building, and has a total floor area of over 22,000 square feet. The museum is equipped with dust-proof cases and has every modern museum appliance. The curator's room and receiving room are equipped for laboratory work and have elevator connections with the receiving room in the basement. In the basement are located x-ray rooms, students' lockers, rooms for instruction in bandaging, and a receiving room for museum specimens. The locker room is extended on both sides into a wide corridor which runs underneath the terrace facing each laboratory, thus forming a covered passage between the four laboratories and the administration building.

The four laboratories are so arranged that those most closely affiliated with each other are in the same building. These buildings are located as follows: On entering the court from Longwood Avenue the first building on the right is the hygiene and pharmacology building; the other building on the right is the physiology and chemistry laboratory. On the opposite side of the court the building nearest Longwood Avenue is for pathology and bacteriology, while the one for anatomy and histology is next to the administration building. In the rear of the pathologic and bacteriologic building and separated from the main laboratory, is a building for animals, with accommodations for all kinds and sizes, from cows and sheep to birds and guinea-pigs. The power house is situated some distance in the rear of the hygiene-physiology pair of buildings and at the best advantage for furnishing heat, light, electricity, refrigeration and compressed air to the several laboratory buildings, and also to the adjacent hospitals now built and to be built in the future. Provisions are made for increasing the size of this power plant so as to provide for future hospitals and other buildings, as well as the enlargement of the present laboratories.

Construction of Laboratories.

The construction of the laboratories is unique and original. They are constructed on a plan devised and amplified by Prof. William T. Porter and Prof. Charles S. Minot of the Harvard Medical School. This plan consists of an aggregation of "units," and is briefly as follows: The outside walls are built with piers 4 feet each and the windows between are 6 feet wide and extend to the ceiling to provide proper lighting, the whole making a unit of 10 feet. The outside and corridor walls and the floors are the fixed portions of the buildings, the corridor walls being hollow to contain the heating and ventilating flues. Running through each wing is a central corridor, from which the laboratories lead. The unit room is roughly, 23 feet deep by 10 feet long, the window coming in the middle of the ten-foot exterior wall space. The partitions opposite each unit pier are composed of terra cotta, which can be easily removed or supplied, making a room 23 by 20 feet, or any multiple of 10 feet, thus providing for rooms suitable for small sections, laboratories, private research or for the professors' or instructors' personal use. As the growth of the school necessitates, each wing can be lengthened by additional piers and windows, and when extended to a distance of 216 feet may be connected together in rear, enclosing a court 112 feet long by 70 feet wide. This trebles the capacity of each laboratory without interfering with light or architectural design. The buildings are divided into stories to conform to the needs for which they are intended. In the large laboratories for general students' use the stories are high and the windows are carried to the ceiling, thus affording abundant light to all parts of the room, sufficient for microscopic work.

For smaller rooms used for individual research work intermediate or "mezzanine stories" are introduced. In the center of each building is an amphitheater occupying two stories, and in the second story of each is a library. These are accessible from both wings. Each amphitheater has a seating capacity of 265, and completed facilities for lantern

projections, etc. Each laboratory building is equipped with every facility for carrying on the work of that special department, e. g., the anatomy and histology building has its separate driveway for introducing anatomic subjects, large refrigerator for storage, isolated dissecting rooms, and an elevator so located as to properly serve the dissecting and demonstrating rooms; the physiology and chemistry building its pens, cages, exercise yards, etc., for animals on the roof, while each department conducting operations on animals has its animal operating suite, equipped with most approved hospital appliances; the chemistry wing is constructed with special reference to the varied methods of research and investigation now attracting the attention of scientists; in the bacteriologic and pathologic building four large students' laboratories occupy one wing, while the south wing is divided into mezzanine stories for research work.

The rear end of one basement is devoted to photography. In the hygiene and pharmacology building a completed museum of food products, models of appliances relating to the public health, etc., are given a special section. Comparative pathology forms a separate and distinct department in this building.

The acoustic properties and seating arrangements of the various amphitheaters and laboratories have been carefully supervised by Professor Sabine of Harvard University.

Dedicatory Exercises.

The formal dedicatory exercises were held at the new buildings on Longwood Avenue, Boston, September 25 at 2 p. m. Grouped about President Eliot on the portico and terrace of the administration building were gathered an assemblage of eminent and distinguished scientists and notable persons, while the large gathering of alumni and lay persons on the lawn in front testified to the intense interest felt in this great event. Besides the president and fellows and overseers of Harvard University and the medical faculty, some of those occupying seats on the platform were Governor Guild, Russian Ambassador Rosen, Mr. J. Pierpont Morgan, Mr. Charles H. Tweed, Most Rev. W. H. O'Connell, D.D., Boston; Prof. W. H. Welch, Johns Hopkins University; Prof. William Keen, Philadelphia; Prof. A. Jacobi, New York; Sir Thomas Barlow, London; Dr. William Ewart, London; Prof. Franz Keibel, Freiburg; Prof. John Glaister, Glasgow; Professor Durfour, Lausanne; Prof. C. S. Sherrington, Liverpool; Prof. Ramos Mexico; Prof. R. A. Reeve, Toronto; Sir William Hingston, Montreal; Prof. R. F. Leith, Birmingham, England; Prof. G. S. Woodhead, Cambridge, England; Prof. Harvey Littlejohn, Edinburgh; Prof. S. C. Minot, representing Royal Institute, Florence, Italy, and representatives of every university and medical school in America, as well as from many American and foreign scientific bodies.

Program.

The exercises consisted of prayer, George Angier Gordon, D.D. Address, "The Enlarged Foundation," J. Collins Warren, (Hon.) Moseley Professor of Surgery. "The Buildings," Charles A. Coolidge, representing the architects. "Acceptance of the Buildings," the President of the University. "The Faculty of Medicine," the Dean. "The Laboratories," Thomas Dwight, Parkman Professor of Anatomy. "The Clinics," Frederick C. Shattuck, Jackson Professor Clinical Medicine. Dedication of the Buildings, the President of the University. Benediction. Demonstration of the buildings.

The Enlarged Foundation.

Dr. John Collins Warren spoke as follows:

It is my duty and privilege to announce to you on this occasion the completion of the great undertaking in which the faculty of medicine has been engaged during the past five years.

The first great step toward the foundation of a medical university has been accomplished. The laboratories for teaching and research are about to be opened on a scale far beyond what has been attempted before, and this great machine, with all its vast resources, is to be made an agent not only for the diffusion of learning, but for substantial aid and comfort to the suffering in the numerous hospitals by which it is soon to be surrounded.

But these noble buildings speak not only for a new era in medical teaching and medical research, but also for the interest which has been aroused in its behalf by men and women of public spirit.

How could a more appropriate and enduring monument to illustrious dead be raised than such as these?

This group of three buildings, with classic outline, a fitting memorial to a noble Junius, one whom we are proud to remember as a former citizen of Boston, is to-day dedicated to science by the princely liberality of a son—Filius patre dignus—whose benefactions are a household word wherever science and the fine arts are held in high esteem.

Nearby stands a memorial to one of the pioneers who have opened a pathway for the commercial world to the treasures of our great west, a monument made possible by a lady bountiful, whose devotion to the memory of her husband has been illustrated in many a worthy cause.

But it should not be forgotten that one building is the gift of a citizen of Boston, and is to bear an honored Boston name, a name which stands for all that that implies; and we shall ever gratefully recall the innumerable gifts of the grand army of Bostonians who are, and always have been, ready with generous aid.

Last, but not least, we must remember to-day the good deed of one who studied with intelligent care this great educational problem and by generous endowment made it a living reality.

To you benefactors, all I stand here to-day, in behalf of my colleagues, to say that from the bottom of our hearts we thank you, and that we appreciate what you have done for us, and we would pray for good will and sympathy from you in our work, for does not the Scripture tell us that "where thy treasure is there will thy heart be also"?

Dedication by President Eliot.

President Eliot's dedication of the buildings was as follows:

> I DEVOTE THESE BUILDINGS AND THEIR SUCCESSORS IN COMING TIME TO THE TEACHING OF THE MEDICAL AND SURGICAL ARTS, WHICH COMBAT DISEASE AND DEATH, ALLEVIATE INJURIES, AND DEFEND AND ASSURE PRIVATE AND PUBLIC HEALTH, AND TO THE PURSUIT OF THE BIOLOGIC AND MEDICAL SCIENCES ON WHICH DEPENDS ALL PROGRESS IN THE MEDICAL AND SURGICAL ARTS AND IN PREVENTIVE MEDICINE. I SOLEMNLY DEDICATE THEM TO THE SERVICE OF INDIVIDUAL MEN, AND OF HUMAN SOCIETY, AND INVOKE ON THEM THE FAVOR OF MEN AND THE BLESSING OF GOD.

In accepting the buildings President Eliot said that the buildings and the permanent funds accompanying them was the largest single addition to the university since 1650. He further said:

The president and fellows well understand to whom they are indebted for this great gift. It is due in the first place to the constructive imagination and indomitable zeal of a few of the university's teachers of medicine; secondly, to the discerning and liberal acceptance by a very few rich men and women of veritable opportunity to do some lasting and pervasive good, with no admixture of evil, and with high promise of prompt beneficent results, a promise firmly based on the rapid progress of medical science within the past thirty years; thirdly, to the accumulated influence in favor of the medical profession which has been exerted in Boston and its vicinity for more than 100 years by a series of much-respected medical personages and strong medical families; and lastly, to the habit of contributing to public objects from private means, clearly manifested by the first settlers on Massachusetts Bay, and maintained and amplified by the best part of the community in every generation since, as the people rose from poverty to comfort and through a diffused well-being to occasional private affluence and public magnificence.

These superb buildings, therefore, are an expression of the intelligence and public spirit of many generations, and of the ardent hopes of the present generation for a new relief of man's estate.

The Medical Faculty.

Dean William L. Richardson spoke briefly on the growth and development of the school during its twenty-three years in the Boylston Street building. Continuing he said:

In these new buildings all that one could ask for has been provided, both for medical education and for scientific investigation and research. Here we have, as the president of the university stated on another occasion, "the means for a new start for medical education and research in our country."

The facilities are so ample and the equipment so complete that the faculty has decided to make a new departure and to open all courses, including laboratory courses, to persons not candidates for the degree of doctor of medicine, but to special students in other departments of the university.

In taking possession of these new buildings the faculty feels a great responsibility, and can only express the hope that the future history of the school will show that the faculty has been faithful to the trust this day committed to it.

Laboratory Opportunities.

Prof. Thomas Dwight, in speaking for the laboratory, said in part:

One of the most striking phenomena of medical education during the past thirty years has been the gradual, unconscious, progressive, self-arrangement of the various studies into two grand groups, that of the laboratory and that of the clinical departments. The former are in the main preparatory to the latter, in which the patient is the central figure. Sometimes the former are spoken of as the scientific courses; but this is a usage against which I protest. It is a reflection on the clinical courses, for all study and instruction should be scientific. On the other hand, the word "scientific" may suggest that the laboratory courses are not practical. This would be to say that they are taught under a misapprehension of the primary purpose of a medical school, which is to train students to practice medicine on their fellow-beings. But, and here is the heart of the matter, there is a sharp distinction between courses which are essential to a degree, and those which are not.

But this pronounced separation of the departments into these groups implies no opposition between them. On the contrary, I see everywhere the laboratory departments adding more and more copiously to the knowledge directly applicable to the welfare of our neighbors. If I mistake not, a new era has begun which already has given an earnest of what science can do for humanity, and which in the future will gain results beyond our hopes.

Clinical Facilities.

Dr. Frederick C. Shattuck, in speaking for the clinics, traced the course of study offered in medical schools and emphasized the fact that the laboratories represented only half of the undergraduate study. Continuing he said:

The paramount fact to which I beg to call your attention is that you see about you only a portion—I think I can safely say the subordinate portion—of the necessary means for furthering progressive medicine. You see provision for the foundations of medical study and for such research into the nature of the disease as can be adequately carried on outside of, more or less apart from, a hospital which is as truly a laboratory as any one of this group of buildings.

The two great and many of the lesser hospitals of the city are within easy access. We have good reason to hope that within a few years a new and largely endowed general hospital will be in operation at our very doors, in full coöperation with the university in the promotion of the highest aims of medicine.

I do not know a medical school in the country which at present enjoys such clinical advantages as does the Harvard school. On the continent of Europe hospitals and medical schools are practically parts of the state and are supported by it. In this country the two grow up independent of one another, for reasons which, however interesting they are, we can not here consider. Their separation has been and is still a bar to progress in this country.

The keen American intelligence of those responsible for hospital management is rapidly recognizing the indisputable fact that the humanitarian and the educational duties of the hospital do not conflict—that they are indissolubly bound together if, indeed, they are not identical. The patients under the charge of a teacher of medicine, surrounded by sharp-eyed and critical young men, are sure to receive more careful study than patients not so guarded. That sick man is fortunate whose doctor, while caring for him, cares also for the advance knowledge in medicine in the largest sense.

After the dedicatory exercises demonstrations were given in the various laboratories, and light refreshments were served from booths erected on the terraces. Music was furnished during the exercises by a specially trained alumni chorus.

In the evening the officers of the Alumni Association tendered an informal reception at the Boston Medical Library to the alumni and invited guests and delegates.

Academic Session.

This part of the celebration was held at Sanders Theater, Cambridge, September 26 at 11 a. m., and took the form of commencement exercises. The following program was carried out:

Sheriff Fairbairn called the assemblage to order. Rev. Edward C. Moore offered prayer. Then followed the hymn, "Here Discovered are Foundations" by Grieg, sung by the large alumni chorus, which later was heard in the specially composed number by Professor Converse, "Laudate Dominum;" "Great is Jehovah" by Schubert-Liszt, and the Harvard hymn, sung by chorus and audience. The literary portion of the exercises consisted of addresses by President Eliot and Professor Welch, the presentation of the roll of delegates by Dr. Harold C. Ernst and the conferring of degrees.

The scene at the theater was one of the most brilliant ever witnessed there, the many colored academic costumes of the visitors and the almost universal gowning of the Harvard men giving the occasion an academic touch unique at medical school exercises. The spontaneous and tumultuous ovation given Dr. Warren and Dr. Bowditch when President Eliot announced the names of the recipients of honorary degrees, was one of the most marked tributes ever paid by a Harvard audience to a Harvard man. Later, when Professor Welch acknowledged the obligation which the medical profession owes to President Eliot, the audience broke forth in applause which lasted many minutes.

The Future of Medicine.

President Eliot said in part:

The future occupations and interests of the medical profession are to be in some respects different from those of the past, and they are to be more various. The ordinary physician has for the last 100 years been almost exclusively a man devoted to the treatment of diseases already developed in human bodies or of injuries already incurred.

The progress of what we call civilization exposes human beings more and more to the ravages of disease. When savages come in contact with men called civilized, they invariably suffer from diseases new to them. When a rural population crowds into cities, it falls a victim to diseases from which in the country it had been exempt. When hundreds of thousands of people huddle into small areas, and create there smoke, dust and noise, they suffer not only from new diseases, but from the exacerbation of diseases, not wholly unknown to them in the rural condition.

If civilized society is to endure under its new exposures and dangers it is clear that the medical profession must take up with more ardor the work of preventing approaching disease in addition to the work of treating diseases arrived. The profession must recognize that health is eminently a social product, just as the psychologists have recognized that the mind of a civilized man is a social product.

Thus thousands of physicians all over our southern states must for years be teaching the people how to protect themselves from yellow fever. Maj. Walter Reed and his colleagues proved how yellow fever is communicated and—what was equally important—how it is not communicated; but thousands of medical men must see to it that intelligent application is made of that precious knowledge.

Recent events have brought into strong light a new function of the medical profession which is sure to be amplified and made more effective in the near future. I mean the function of teaching the whole population how diseases are caused and communicated, and what are the corresponding means of prevention. The recent campaign against tuberculosis is a good illustration of this new function of the profession. To discharge it well requires in medical men the power of interesting exposition, with telling illustration and moving exhortation.

Obviously, the function calls for disinterestedness and public spirit on the part of the profession; but to this call it is certain that the profession will respond. It also calls for some new adjustments and new functions in medical schools, which should hereafter be careful to provide means of popular exposition concerning water supplies, foods, drinks, drugs, the parasitic causes or consequences of disease in men, plants and animals, and the modes of communication of all communicable diseases.

Medical museums should be arranged in part for the instruction of the public, and with some suitable reservations should be statedly open to the public. The medical schools should also habitually provide popular lectures on medical subjects, and these lectures should be given without charge on days and at hours when working people can attend. In other words, selected physicians should become public preachers, as well as private practitioners. America has much to learn from Europe in regard to this public-spirited service on the part of the profession.

The University of Medical Sciences.

Dr. William Henry Welch of Johns Hopkins University said:

To have recognized fully from the beginning of his administration the importance of this vitalizing union of the medical school with the university, to have striven patiently wth full grasp of the problems and with intelligent sympathy with the needs of medicine for the uplifting of the standards of medical education, and, with the aid of his medical colleagues, to have planted these standards where they now are in the Harvard medical school, is not the least of the many enduring services which President Eliot has rendered to American education, and, in behalf of our profession, I wish to make to you, sir, on this occasion, grateful acknowledgement of this great and beneficent work.

During the last two decades we have witnessed in this country the extraordinary rise of practical laboratory instruction from the weakest to the strongest and best organized part of our medical curriculum of our better schools. Our laboratory courses are, I believe, in several instances more elaborate and occupy more time than corresponding ones in most foreign universities.

It is, however, in my judgment, an error to suppose that from the point of view of science any fundamental distinction exists between the clinical and so-called laboratory subjects other than that based on differences in the subject-matter of study. The problems of the living patient are just as capable of study by scientific methods and in the scientific spirit and they pertain to independent branches of medical science just as truly as those of anatomy, physiology or the other so-called laboratory subjects. All of the medical sciences are interdependent, but each has its own problems and methods, and each is most fruitfully cultivated for its own sake by those specially trained for the work.

There is a highly significant and hopeful scientific movement in internal medicine and surgery to-day characterized by the establishment of laboratories for clinical research, by the application of refined physical, chemical and biologic methods to the problems of diagnosis and therapy, and by the scientific investigation along broad lines of the special problems furnished by the living patient.

The most urgent need in the medical education at the present time in this country I believe to be the organization of our clinics both for teaching and for research in the spirit of this modern movement and with provision for an intimate, personal contact of the student with the subject of study as he finds in the laboratory.

In addition to the undergraduate instruction, our laboratories at present furnish better opportunities for the prolonged, advanced training of those intending to make their careers in anatomy, physiology, pathology and other sciences, than are afforded by most of our hospitals to those who aim at the higher careers in medicine and surgery. A further disadvantage is that while the former class, after good, scientific work may reasonably look forward to desirable positions as teachers and directors of laboratories, the latter, however high their attainments, in consequence of the separation of the medical school from any control over the appointments to the hospital staff, can not anticipate with any degree of assurance similar promotion in their chosen lines of work, and consequently the medical faculty has not so wide a field of choice in filling the clinical chairs as in filling those of the auxiliary sciences.

The removal of these deficiencies on the clinical side of medical education in America requires some reorganization of its staff on the part of the hospital, or at least its voice in appointments to the hospital staff. So far as our resources permit, we have, I think, accomplished this reform at the Johns Hopkins Medical School and Hospital. The welfare of the patient is the first obligation of the trustees of the hospitals and of physicians in attendance, but nothing is more certain than that cordial coöperation between medical school and hospital best subserves the promotion of this welfare. Fortunate the hospital and fortunate the patients brought into such relations with the Harvard medical school.

Award of Honorary Degrees.

President Eliot awarded the honorary degrees as follows:

Honorary Doctor of Arts.—Charles Allerton Coolidge, architect, designer of the buildings.

Honorary Doctor of Science.—Dr. Simon Flexner, New York.

Doctors of Laws.—Dr. John Collins Warren, Boston; Dr. Henry Pickering Bowditch, Boston; Dr. Jose Ramos, Mexico; Dr. Franz Keibel, Freiburg, Germany; Dr. Charles Scott Sherrington, Liverpool, England; Dr. Francis John Shepherd, Montreal; Sir Thomas Barlow, London, England; Dr. Abraham Jacobi, New York.

The Triennial Dinner.

This was held in Memorial Hall at the close of the exercises. About 700 guests and students were present. Dr. Alfred Worcester, president of the association, presided. Speeches were made by President Eliot, Governor Guild, Professor Welch, Professor Jacobi, Sir Thomas Barlow, Dr. Warren, Professor Keibel and Senor Ramos. All the speeches contained allusions to the new medical school, and the chairman's reference to the occasion as "one common brotherhood" of the medical fraternity all over the world called forth prolonged enthusiasm.

President Eliot emphasized the religious side of medical science, and referred to the deep religious sentiment prevailing in the music rendered by the alumni chorus at the different exercises. He counseled the medical profession to get together and work together in harmony and coöperation to attack moral as well as the physical evils which infest human society. Governor Guild made a most stirring address on the achievements which Massachusetts and Massachusetts men have accomplished for the betterment of mankind. He recalled three notable advances in public health legislation enacted by the Massachusetts legislature during the year 1906, namely, the state care and education of feeble-minded children; the compulsory medical inspection of school children in all the schools of the state, and the law regulating the sale of "patent medicines" containing poisonous drugs.

Sir Thomas Barlow said that he and his colleagues never dreamed of seeing such a vision of beauty, of charm, of absolute adaptation to the needs for which such buildings are erected as that which he had witnessed on this occasion.

Professor Jacobi said that the astounding impression made by the new medical school took him back to the age of Pericles and Phidias.

Congratulatory speechs were made by Professor Keibel and Dr. Ramos. The ceremony was fittingly closed by Prof. J. Collins Warren, who announced that a large general hospital in connection with the new buildings would soon be erected, and that plans were well completed for beginning the undertaking at a very early date.

Correspondence

The Attacks on the American Medical Association.

SAN FRANCISCO, Sept. 21, 1906.

To the Editor:—Please allow me to congratulate you most sincerely on the presentation, in recent issues of THE JOURNAL, of the facts pertinent to the Walker resolutions, which were introduced at the Boston session, and also the explanation of the attitude of the *Medical Record* in its despicable attack on the Association.

In regard to the Walker resolutions, it is rather unpleasant to me to note that my motion, which, you will recall, was to reconsider the motion which placed these resolutions on the table, has been rather generally looked on as an indication of approval of these resolutions. This is most emphatically an error. Dr. Happel correctly stated the intent of my motion in his reply to Dr. Carstens' letter. My desire was to emphasize the rejection of the proposed resolutions, and to prevent any attempt at their subsequent consideration. The President ruled my motion out of order and, while I disagreed with him as to the correctness of his ruling, I did not consider it a point of sufficient importance to raise an objection.

In regard to the oft-reiterated claim of dissensions in the ranks of the Association, of course, I can speak only for our state, but, so far as California is concerned, I take great pleasure in advising you that never before, within my knowledge of society affairs, has there been such a general approval of the American Medical Association and of its many and various important undertakings. Never has dissension been further away than at the present time. PHILIP MILLS JONES.

Standardization of Suprarenal Products.

DETROIT, Sept. 25, 1906.

To the Editor:—A very erroneous impression is likely to be made on the minds of your numerous readers by your editorial on page 944 of THE JOURNAL, September 22. To 19 men out of 20 the clear meaning of the article is that manufacturers do not standardize their suprarenal preparations, whereas, speaking emphatically for ourselves, we do standardize these products, with special reference to our adrenalin and adrenalin solution, ointment and inhalant. We have always done so. In THE JOURNAL as far back as 1902 (see page 150, Jan. 18, 1902), our exact method of standardization was set forth in the fullest detail by our chief pharmacologist, Dr. E. M. Houghton.

We have no objection to government supervision over the suprarenal preparations of the market; some of them need it. But the very thing which you are urging we have performed systematically ever since we began to market *any* of the preparations of the suprarenal gland, standardizing each and every lot of every single preparation and guaranteeing its physiologic activity.

If you will refer to page 1732 of the last edition of the National Dispensatory you will find likewise a complete working method for the assay of adrenalin and other products which are not susceptible of chemical assay.

PARKE, DAVIS & CO.,
Per E. G. SWIFT, General Manager.

Populations of Cities in the Educational Number.

PORTLAND, ORE., Sept. 19, 1906.

To the Editor:—In the Educational Number of THE JOURNAL, August 25, in giving the population of cities, you give Portland, Ore., 98,655, and, while this is taken from the United States census of 1903, it places our city in an unfair position. Our city to-day has a population variously estimated at from 150,000 to 200,000. From all available sources the conservative estimate places our city at 175,000, and this is not "hot air." We have substantial facts to bear us out.

I have asked Governor Chamberlain, Mayor Harry Lane, M.D., of Portland, Auditor Devlin of Portland, and Tom Richardson, manager of the Portland Commercial Club, for estimates, and will enclose their replies. Portland has not been advertised as most western cities have been, and is comparatively little known in the East, and it is only just to give us the prominence to which we are entitled.

BYRON E. MILLER, M.D.,
Secretary of the Board of Medical Examiners of the State of Oregon.

[The letters which Dr. Miller enclosed estimate the present population of Portland at from 150,000 to 178,705. Since the statistics referred to were for last year, the growth in population *subsequent to 1905*, while a matter for congratulation, is immaterial. The figures published were taken from the official estimates made by the Census Bureau in 1903, so as to have a recognized basis. We are glad to give publicity to the facts brought out by Dr. Miller.—ED.]

The Teaching of Medical Jurisprudence.

PHILADELPHIA, Sept. 8, 1906.

To the Editor:—A valuable service to the cause of good medical education was done by your editorial August 25 concerning the extent of teaching of medical jurisprudence in American medical schools. During a considerable part of my active professional life, I was chemist to the coroner and district attorney of this city, and had, therefore, much opportunity to see the necessity of instruction in the determination of causes of death. It seemed sad to see the vast amount of valuable material that was allowed to go to waste in connection with numerous and varied forms of violent death.

In this city the coroner appoints one or more physicians, who make the necessary postmortems and report to the office. As is known throughout the nation, Philadelphia has been for many years in the grip of a political ring, which has no superior in the world for corruption and obstruction. The coroner's office is most important to the great corporations. Verdicts from the coroner have important bearings on damage suits, and in the years in which I was familiar with the coroner's office in this city, it was the custom of one of the street railway companies to give money, generally $5, to the

coroner's clerk when a death on that road was under inquiry. In one case, the clerk wanted $10 (probably a difficult case!), but the road would not give more than $5. The result was a verdict blaming the railroad company. The late Mr. Singerly of the Philadelphia *Record* was the principal officer of the road. He immediately set his reporters to work on the records of the coroner's office, exposed a startling amount of corruption and broke up the whole combine by publication of all the details in the *Record*.

It has so happened that almost at no time during the past forty years in this city has a coroner's physician been connected with a medical school in a capacity that would enable him to utilize the material for instruction of students. Most of them have had no teaching positions, and many could not obtain such. In one case a teacher of pathology in a prominent local school was coroner's physician, but he had no interest in medical jurisprudence properly so called, and was, indeed, so unreliable that he would have been a misleader more than a leader.

In THE JOURNAL, September 8, exception is taken by a correspondent to your remark that certain New York schools make no mention of the subject; it is stated that a judge of a New York court delivers fifteen lectures to third-year students at Long Island College. I do not desire to cheapen in any way the work of the person in question, especially as I have not the slightest knowledge of the character and scope of the course, but I wish to state emphatically that lectures by a member of the bar, however eminent and able, are not sufficient as instruction in medical jurisprudence. Experience with trials in criminal courts will amply convince any physician that no lawyer fully appreciates the problems and methods of the science of medicine. For many years I have been a member of the Medical Jurisprudence Society of this city, and I have heard many lawyers, some of them eminent and with a large criminal court experience, discuss question of medical jurisprudence. In most cases they are wholly out of line with the scientific aspects of the case.

The probability is that lectures by a lawyer will cover questions of ethics, general and legal, limitations of professional duties and rights, and cognate questions, but what the medical student needs is practical instruction in the determination of the cause of death. He should have opportunity to see and examine the bodies of the drowned, poisoned, shot and strangulated and victims of other violent deaths; to learn, not by reading or listening, but by seeing, the distinction between still-born and murdered infants, and so on. Then there is the vast field of insanity, so misunderstood by the community at large and so mistried by the courts. In one famous case in this county, in which the evidence of delusional insanity was as clear as day, the trial-judge, one of the most able and honored of the Philadelphia judiciary, shouted out in antagonism to one of the defense witnesses: "If this man is insane, then I wish to say that this is the kind of insanity for which we hang men in Pennsylvania." No, lawyers alone can not conduct a course of medical jurisprudence..

HENRY LEFFMANN.

Nostrums and Advertising.

GUM SPRINGS, VA., Sept. 17, 1906.

To the Editor:—On receipt of bill for renewal of my subscription to the *Monthly Cyclopedia of Practical Medicine*, I acknowledged it by writing them the following letter:

GUM SPRINGS, VA., Aug. 4, 1906.

F. A. Davis Co., Philadelphia.

Gentlemen:—You favor of the 3d inst. received, enclosing bill for subscription to the *Monthly Cyclopedia* for 1906.

Permit me to say, first, that I did not subscribe for this journal for 1906. Second, that while recognizing merits which it has, there are considerations found in its advertising columns which will keep my name off its mailing list.

A casual glance reveals advertisements of such frauds as Antikamnia, Anasarcin, Uric-Antagon, Melachol, Ergo-Apiol (Smith), Kalmol, Peptomangan, etc. Continuing, I find, under the caption, "Notes and Comments," a series of "writeups" of numerous proprietaries of this class, such as Neurosine, Vin Mariani, Peptomangan, and others. With these facts before me I do not care to subscribe for the *Monthly Cyclopedia of Practical Medicine*.

Very respectfully,

W. K. MCCOY, M.D.

In reply to this I received the following letter:

PHILADELPHIA, Aug. 8, 1906.

Dr. W. K. McCoy, Gum Springs, Va.

Dear Doctor:—Your favor of the 4th inst. duly received. We note that you have passed condemnation on our journal for carrying the ads of firms that have been and are occupying advertising pages in all the leading medical journals of the country, with the exception of THE JOURNAL of the A. M. A., which, however, carries the ad of Vin Mariani, which you refer to in your letter as unethical.

When we feel assured that the mass of the medical profession share your views, we will then take up the question and decide whether or not to continue to publish our journals. Certainly we cannot compete with other publishing houses if we are to be debarred from utilizing this source of revenue which they enjoy. As probably less than a half dozen doctors have expressed an unfavorable opinion of our advertising in five years' time, our opinion is that the mass of the profession are not in sympathy with the views which you express.

This, however, is not to be construed as an endorsement of any pharmaceutical preparation. The idea that we wish to convey is that at present the question is too vague for settlement. We consider the good will of our customers as of a great deal more importance than the interests of an advertiser, and whenever we are convinced that the sentiments of our subscribers are becoming in accord with you own, we shall then, as above stated, decide whether to continue our journals without advertising or discontinue them altogether. Very truly yours,

F. A. DAVIS COMPANY.

Is it not time that physicians let publishers of medical journals know their opinion regarding the advertising of nostrums? This firm says that their "opinion is that the mass of the profession are not in sympathy with the views which you [I] express." Are they correct? If not, is it not time for us to let them and other publishers know it? Very respectfully,

W. K. MCCOY, M.D.

[EDITOR'S NOTE:—If every physician would take the trouble to do as Dr. McCoy did, there would soon be a radical change in the advertising pages of many of our journals, and the most effective blow would be struck at the nostrum evil that it is possible for the profession to strike. Every physician will acknowledge that if the newspapers should refuse to accept the alluring advertisements of fraudulent "patent medicines," the fraudulent "patent medicines" would become a minus quantity. If medical journals should stop publishing advertisements of nostrums, nostrums would soon cease to exist, or nearly so. The F. A. Davis Company says that THE JOURNAL of the American Medical Association carries the advertisement of Vin Mariani. The advertisement of Vin Mariani has not been in THE JOURNAL of the American Medical Association for five years.]

The Oppenheimer Institute and Its Endorsers.

OIL CITY, PA., Sept. 27, 1906.

To the Editor:—The following is a copy of a letter to the *Literary Digest* and Mr. Wagnall's reply. The letter is so wholesome, and its tone on the whole so fair and candid, that I believe it should be given space in THE JOURNAL:

OIL CITY, PA., Sept. 22, 1906.

Funk and Wagnalls, New York.

Gentlemen:—Your circular letter announcing the coming of a new magazine from your press, *The Circle*, and asking that I pledge my support to the new venture by filling and returning the "enclosed card" reached my desk yesterday. Coincidently, and with the same mail, the *Digest* and *Collier's* for to-day, September 22, were received.

It then occurred to me that I had before me a strange combination. On my right, its pages open on the last of the series, "The Great American Fraud," by Samuel Hopkins Adams, lay *Collier's Weekly*. On my left, its advertising pages given to the endorsement of the same, lay the *Digest*. Between the two, pleading, with a wealth of rhetorical diction, for my support, lay the letter.

Judging from its tone, together with the preliminary introduction of the magazine in embryo, the purpose seems plain, i. e., the uplifting of the home circle—hence the title, *The Circle*.

Assuming that a great many of the *Digest* subscribers belong to the medical profession, and as one of the class, I believe we should know in advance the policy which the advertising department of *The Circle* intends to maintain.

Will my sons and daughters in reading the advertising pages of this new magazine

"Find themselves stricken with fear and dismay,
Feeling God or the devil has led them astray?"

A question was then suggested, "Why have I never read an abstract of 'The Great American Fraud' in the *Digest?*" I turned to the *Digest* at my left for the answer. It says (see advertisement of the Oppenheimer treatment):

"The Alcoholic Craving, by Means of the Treatment, is Absolutely Removed in 12 to 48 Hours, and the Patient is Permanently Restored to a Normal Condition."

Impossible. Contrast this statement with the letter written to Oppenheimer by America's honored and loved Mark Twain, in which the Oppenheimer doctor is invited to put h's business on a basis of common honesty, etc. Think of it! A man of Mark Twain's standing is moved to invite one, whose dishonest claims have found voice in the *Digest*, to put his business "on a basis of common honesty."

Turning again to the last of the series by Mr. Adams, we are shocked to learn of Mr. Wagnalls, of Funk and Wagnalls, lending his influence to the fake, and with "no personal knowledge of beneficial results or otherwise." Money makes fools of us all.

There is that about printers' ink which to the average mind suggests truth. A printed statement will be believed where a verbal one would perish in doubt. What a power this has given the press! How that power has been abused! What a pity to betray such unbounded confidence, such a trust. I am sure that *The Circle* will be a gem in the literary world; if its purpose is to elevate the home, it must necessarily follow that its advertising pages should be kept clean. Promise this, and my influence, small though it is, my voice, weak as it is, my money, scarce as it is, will be gladly given to welcome the coming of *The Circle*. Very truly your,

J. C. O'DAY.

NEW YORK, Sept. 26, 1906.

FUNK AND WAGNALLS COMPANY,
Office of the Vice-President.

Dr. J. C. O'Day, Oil City, Pa.

Dear Sir:—Your letter of 22d inst. is before me. Concerning my name used by an institution, I would say that I am not responsible for the partial statements made by others. When I wrote to Mr. Clemens last November I was particular to say that "my name was used at the beginning" (over twelve years ago) "of the institution *through misunderstanding. Some years ago I positively ordered the withdrawal of my name from the list of advisory directors.*" The original representations made me were quite different from what it seems the institution now is. There never was any money in it. Indeed, if any had been, I positively would have declined in the very beginning. I am not constructed in that way at all. Nor can you find my name anywhere else.

I am pleased to add that the advertising department of the *Literary Digest* has struck that institution off from its list of advertisers admissible to its columns. I am glad Mr. Adams has shown up the concern.

Thanking you for your good words in behalf of *The Circle*, I remain, Yours very kindly,

A. W. WAGNALLS.

The work of revelation that Mr. Adams has been carrying on in *Collier's* is having its effect, and we who claim to represent all that is high and good in the medical world should willingly encourage those who are giving their columns to the cause.

Very truly yours, J. C. O'DAY.

Interstate Reciprocity and Frauds in Medical Schools.

SAN FRANCISCO, Sept. 28, 1906.

To the Editor:—The September 15 issue of your esteemed JOURNAL contains a reply of Dr. Harison, secretary of the Michigan Board of Registration, to Dr. Tait of California (letter September 1), and to Dr. Harvey of Massachusetts (article August 25), both of whom consider that system as either pernicious or dangerous, at least under present conditions.

The California statute provides for reciprocity in the discretion of the board of examiners, but the board has thus far remained outside of the reciprocity fold, although often invited to enter. It may interest the profession to know that the reciprocity clause of the California statute was before the Supreme Court of that state in the case, Ex Parte Gerimo, decided on in 1904. Counsel of Gerimo, an ex-judge of the court, attacked the law on the ground of the alleged unconstitutionality of the clause in question. Dr. Harison himself has pronounced against the constitutionality of the particular clause, assigning as his reason that it fails to recognize the so-called rights of practitioners licensed without examination under the former legislation of other states. This objection was directed by the ex-judge against the entire act. The Supreme Court, however, brushed the objection aside, holding that the reciprocity provisions were not an integral part of the statute; that they might be unconstitutional without impairing the validity of the remainder of the act; in which event, the court declared, the effect would be to subject all applicants to the examination. Of course, if Dr. Harison is right in his contentions that the provision for reciprocity is unconstitutional, then all hope for reciprocity between California and her sister states is, under present conditions, gone; for certainly the Board of Examiners can not, at the instance of the enthusiastic apostles of that system, make the statute constitutional.

Dr. Harison distinguishes between absolute and what he is pleased to term restricted or individual reciprocity. The California act would seem to be broad enough to include both forms. Nevertheless, the discretion expressly conferred on the board would have to be exercised within the limitations of the statute, for in California, as elsewhere, the right to reciprocate is derived from the statute. In the language of the act itself, the requirements of the other board must have been at the time of issuing the certificate, in no degree or particular less than those of California at the time it is presented for registration. Is it certain that the requirements of the boards seeking to exchange certificates with California are in no degree or particular less than those of California at the present day?

In California the applicants are known to the examiner by number only, and the secretary can not be an examiner. Judged by the statutes, the ties of blood and of friendship, and more sordid considerations perhaps, would seem to be particularly strong with the medical alma mater, and in this state the legislature has surrounded even the Board of Examiners, although chosen by the profession, with safeguards against fraud. In California the examination of candidates is entirely in writing and the papers must be filed. Any state anxious to reciprocate with California may thus readily ascertain whether the standard of medical knowledge exacted by that state is fully up to her own. Dr. Harison says that under a reciprocity agreement the boards may and are expected to go behind each others' certificates. Michigan, he declares, exercises her right to go behind credentials. Now, if it is advisable that the credentials of an individual applicant should be reinvestigated, why is it not equally advisable that the reciprocating board should have the examination papers of the applicant before it, for without such an inquiry how may it determine whether or not he possesses the qualifications which would have been demanded of him had his application been an original one? All this greatly multiplies the labor of the boards, and furthermore, it is contrary to the spirit and purpose of reciprocity. It is not reciprocity at all.

The California board has up to the present time doubted the legality and advisability of reciprocity between herself and the states willing to exchange certificates with her. Nevertheless, she has always been willing to stand shoulder to shoulder with her sister boards in the task of providing competent physicians for the people. She has not favored reciprocity because it looked too much like abdication and surrender of sovereignty when absolute, and as entailing arduous duties and apparently almost impossible of conscientious fulfillment, when restricted and individual. In place of the doubtful advantages and the dangerous tendencies of reciprocity, so clearly illustrated by Dr. Harvey in his admirable paper, California has endeavored to bring about a system of coöperation between boards of examiners for the common good of the profession and the people, whose interests are, after all, identical. Believing that insufficient medical education was the disease responsible for boards of examiners, the California board has sought to take the evil at its source as far as the law permitted it, and two years ago invited interboard coöperation in the matter of the investigation of medical diplomas. The board instructed its secretary to forward to other boards the results of its investigation of credentials, inviting similar information in return. Numerous instances of grave irregularities and even fraud on the part of supposedly high-grade colleges were reported by California. In response a few boards approved of the "plan of reporting candidates failing at the examinations!" None sent any information relating to investigation or rejection of diplomas. What wonder, then, that the impression that eastern boards, Michigan among the number, still failed to go behind diploma and affidavit, so universally the practice under the old régime, should prevail in California. Dr. Harison has neither published nor furnished us with statistics to the contrary.

The California board lays great stress on the investigation of credentials, in obedience to the state statute; and, before reciprocity with other boards can be considered, the members of the board would certainly wish to know whether similar functions are exercised by the boards seeking to reciprocate with California, and also which boards go behind the applicant's affidavit as to his preliminary and medical education.

On behalf of the board I would like to inquire the extent of the rejection of diplomas, if any, and whether any case is within their knowledge, where a certificate procured by fraud was canceled on that ground.

WILLIAM C. TAIT.
Attorney for California Board of Medical Examiners.

SAN FRANCISCO, Sept. 21, 1906.

To the Editor:—September 1 you published a letter by Dr. Dudley Tait in which statements were made derogatory to the good name of the College of Physicians and Surgeons of San Francisco. Each and all of those statements that in any way reflected on the college mentioned were incorrect. Regarding this case Dr. Tait secured no information and made no effort to secure information from the college authorities. He ignored the fact that this student secured advanced standing on good and sufficient credentials, and took his required work in the summer courses which this college was then conducting. He ignored the further fact that this student was in attendance in the freshman and sophomore years. I have no desire to infringe on your space, but I ask the profession to reserve judgment until both sides are heard. To go into details here would require more space than you are probably willing to grant. Any one who desires the truth regarding the matter may obtain it by writing to me. D. A. HODGHEAD,

Dean, College of Physicians and Surgeons of San Francisco.

Internal Administration of Antitoxic Sera.

EAST ORANGE, N. J., Sept. 21, 1906.

To the Editor:—May I inquire if any readers of THE JOURNAL have administered antitoxic serum in other ways than by subcutaneous injection, and if so, what has been their experience? In England and elsewhere it has been demonstrated clinically that serum given *per os* or *per rectum* is effective, yet one seldom or never hears of these methods being practiced in this country. As the question is of considerable practical importance, it may be interesting to refer to some of the literature on the subject which justifies the change of method.

Within the last few days it has been announced that Professor Behring's latest remedy against tuberculosis, called tulase, is about to be given an extensive trial in the hospitals of France and Germany, and, by his direction, it may be introduced into the system either by subcutaneous injection or by swallowing. This is in accord with the experimental work of others. Figari (*Berlin klin. Woch.*, Jan. 18, 1904), experimenting with the blood of animals immunized against tuberculosis, found that it contained substances which administered to guinea-pigs internally in the form of a powder, raised the agglutinating power of their blood serum and antagonized the action of tuberculous toxins. The same effects were produced by him in the human subject. Roncagliolo administered a similar serum to his patients internally, and also claims to have increased the antitoxic power of the blood with an encouraging therapeutic effect (*Medical News*, Feb. 27, 1904, page 403).

Sera are also efficacious when given *per rectum*. In the London Temperance Hospital, the administration of various sera by rectal injection has been practiced for the last six years, and it has been found they have precisely the same effect as when injected subcutaneously; the action seems equally rapid, while the danger of spreading inflammation and local abscesses at the site of injection is removed (*Lancet*, May 5, 1906).

In an article on "The Treatment of Malignant Endocarditis by the Rectal Administration of Antitstreptococcic Serum," the writer states that he has used this serum in more than 200 cases of septic infection of various kinds, but found that the usual method of injecting the serum under the skin was open to objection. It was so painful that patients, especially if they were stout, dreaded the injection, and it was liable to be followed by rashes of the skin and joint affections. The administration of the serum per rectum was therefore tried, and the result has been so satisfactory in over 25 cases as to lead to the abandonment of subcutaneous injection of the serum (*Ib.*, April 21, 1906, p. 1103).

In a communication on "The Use of an Antistreptococcic Serum in Gonorrheal Infections and in Certain Cases of Purpura Hæmorrhagica," Fenwick and Parkinson state that during the last two years they have never encountered a genuine example of gonorrheal rheumatism, either in hospital or private practice, that was not immediately benefited by the serum given per rectum. The effects were immediate, pain being relieved after the second dose, and the tenderness and swelling of the joints rapidly subsiding after the third (*Lancet*, May 5, 1906, p. 1244).

Clinical evidence of the value of antidiphtheritic serum when given by the mouth is furnished by the communications of various physicians to the medical journals (see "Progressive Medicine," Sept. 5, 1905, p. 30). The experience in every case is very similar. One physician relates that two years ago, while injecting the serum, something went wrong with his syringe, and the serum was given by the mouth, with the very happiest results as compared with his previous orthodox cases. Since then he has never used the syringe for this purpose. All his cases were verified by bacteriologic examination (*Brit. Med. Journal*, Dec. 31, 1904, p. 1751). For eight years Paton (Ib., May 5, 1906, p. 1032) has been using by the mouth serums both normal and the product of immunity, with remarkable therapeutic results, and the English branch of Parke, Davis & Co. has for years supplied him with a low potency antidiphtheritic serum especially made for oral use.

As to the objection that the digestive juices destroy the antitoxin before it can be absorbed by the system, recent experiment proves the contrary.

"At the last meeting of the Society of Biology held July 28, 1906, M. Catacuzene and M. Riegler communicated a paper on 'The Toxic Phenomena Following the Administration, *per os*, of Dead Glanders Bacilli.' They had observed that the intrastomachal injection of dead glanders bacilli gave rise to grave symptoms in guinea-pigs, whether young or full grown. The symptoms were those of poisoning followed by death at longer or shorter intervals, or by recovery according to the dose of microbes employed. The preparation of bacilli employed was a culture on glycerin agar, emulsionized in alcohol, in which the bacilli died in a few hours. This emulsion was then centrifuged and the dead bacilli were dried *in vacuo*. When injected into the intestine the dead bacilli gave rise to toxic symptoms varying in gravity with the size of the dose. Not only the soluble portions of the substance, but the very bodies of the bacilli themselves passed out through the intestinal walls and could be detected in the lymphatic glands, in the spleen and in the lungs, in which last organ they produced foci of bronchopneumonia. Small doses given by the mouth produced a tolerance for the poison, provided that three months were allowed to elapse between two doses." *Lancet*, Sept. 8, 1906, p. 688.

To the bacteriologist who injects his serum into guinea-pigs, horses and other of the lower animals, the method employed is a matter of indifference; but to the general practitioner who deals with nervous, excitable children, or with adults who dread the slightest pain, be it only the prick of a needle, it is often an advantage to be able to administer remedies by the mouth instead of subcutaneously, and there is the further advantage of not having to fear the disastrous results which sometimes have followed the injection of an impure serum; at least, this danger is greatly diminished if not actually abolished.

EDWARD M. MERRINS, M.D.

Plaster-of-Paris Dressings.—Dr. R. O. Meisenbach, in the *American Journal of Orthopedic Surgery*, June, has investigated the properties of plaster-of-Paris and brings out some important practical conclusions. The plaster should be manipulated during the initial set, but not after the actual setting has begun. The practice of completing the plaster dressing by rubbing either water or plaster cream on it after the actual set has taken place is entirely wrong, he declares, and tends to weaken rather than to strengthen the dressing. Sodium chlorid tends to hasten the setting, but weakens the strength in proportion to the amount added; dextrin increases the strength, but lengthens the time of setting. Starch in small amounts also increases the tensile strength. Portland cement strengthens the bandage in all its essentials. It also renders the bandages more porous, which permits their being worn with greater comfort and for a longer time.

Miscellany

Leukemia Treated Successfully with Arsenic.—In the London *Lancet*, Aug. 18, 1906 F. L. Dickson reports the case of a man, aged 24, who had an acute, painful enlargement of the inguinal, right axillary and postcervical glands with slight increase in dulness of the splenic area. The case was diagnosed (after blood examination) as one of acute or subacute lymphatic leukemia and a fatal prognosis was given. Dickson administered liquor arsenicalis, 5 minims, three times a day, and after three days the glandular swellings were less and there was marked improvement in the condition of the blood. The dose of the liquor was increased rapidly to 15 minims, and then gradually diminished. In about two months' time the patient made a complete recovery.

Alcoholism.—In an address given before the medical society of Munich (rep. in *Med. Klinik*, April 1, 1906), Kraepelin credits nearly one-half of the admissions between November, 1904 and November, 1905, to the new psychiatric clinic of that city to alcohol; of the imbecile, 42.9 per cent.; of the epileptics, 65.1 per cent. among the males and 28.5 per cent. among the females; of the manic-depressive cases, 43.5 per cent of the males; of the traumatic psychoses, 23.1 per cent.; in arteriosclerosis, 64 per cent. of the male cases, and of the paretics, 51.9 per cent. in men and 43.5 per cent. in women. With the elimination of alcohol, he thinks, one-third of the cases of paresis could be avoided. Beer drinking seems to be responsible for alcoholic dementia to a large extent in Munich. Kraepelin believes in educational work against alcohol, beginning in the school, and the encouragement of total abstinence.

Diagnosis of Stomach Disorders. Burdick (*American Journal of Clinical Medicine*) says that in treating stomach troubles the physician should first attempt to answer the following questions: 1. Might the symptoms be caused by any trouble exterior to the stomach, and if so, what? 2. Is the stomach normal as to size and location? 3. Is there food stagnation—in other words, does the stomach empty itself with reasonable promptitude? 4. Are the secretions normal or abnormal? 5. Are there evidences of inflammatory change or other morbid conditions of the mucosa? Preceding this inquiry he should ascertain the family history, the duration of the disease, coexisting affections, the presence and character of pain, and effect of eating and of alkalies on it, conditions of the occurrence of nausea or vomiting, location of tenderness, and the condition of the bowels. The routine attention to these points renders diagnosis and treatment much less difficult, and avoids mortifying mistakes.

Human Sympathy Doctor's Highest Need—A Layman's View. The following by Chancellor Andrew S. Draper, superintendent of education, New York, appeared in the Chicago *Tribune* as a "lay editorial":

It is too bad that people seem so unable to get rid of a doctor who has become a piece of the family bric-a-brac, when they really want to. The only national society yet to be organized which I can think of, is one which will give the members courage to get rid of physicians of whom they have tired and who have more nerve than they themselves have. If one doesn't like a lawyer he goes to another with his next case, but if he doesn't like his physician he holds on to him with a sternness which philosophy never has explained and experimental psychology has never yet solved. If men and women were not so subject to clap-trap and pretense, they would have better health, pretenders would not be so common nor so persistent, and physicians of worth would be recognized more widely and more uniformly regarded. There is room here for just one more philanthropic national organization, and we ought all to give support to one that would take this good cause in hand.

It needs no mere theory and no bare logic to show that science and sympathy must go together in the successful practice of medicine. The life of every successful physician makes it obvious enough. The lower ranks of the profession are full of men who blunder along and hold on to a weakling or an unfortunate with all of the persistence which credulity permits; but the upper ranks of the profession hold the really successful men in whom human sympathy unites with learning to develop the great soul whom the world recognizes on the instant and for whom it always is eager to remove its hat. The men who are capable of service and who are anxious to serve are the only men worthy of recognition in the medical profession.

And all of us have some sort of claim on the most eminent and successful medical men, and the qualities that have made them successful make them respect it. One who has served whoever called, for small fees or no fees, at all times of day or night, and has come to the time when he can do it no longer and must of necessity discriminate and may in a way fix his own terms, no longer may be bound to respond to every call, but he is bound to have youngsters around him who will, and to keep them straight.

They tell a story of my friend, Dr. Newell Dwight Hillis of Plymouth church, that I do not vouch for, but that easily may be true. It is said that when Dr. Hillis was serving a small church in Evanston, Mrs. Hillis being desperately sick, the young preacher called an eminent specialist, Dr. John C. Webster of Chicago, whose ministrations were successful. Dr. Hillis worried about the bill and after a little went over and said: "Dr. Webster, I can not pay you at once, but I want to know what your bill is, and I will soon arrange it. Here is $50. It is all that I can pay now. Money never can discharge my debt for such eminent services as yours. If you will tell me the amount of your bill I will pay it in full just as soon as I can." Dr. Webster replied: "You keep your money. I owe you as much as you do me. You have made as good in theology as I have in medicine. I will keep Mrs. Hillis out of heaven as long as I can, if you will keep me out of hell as long as you can."

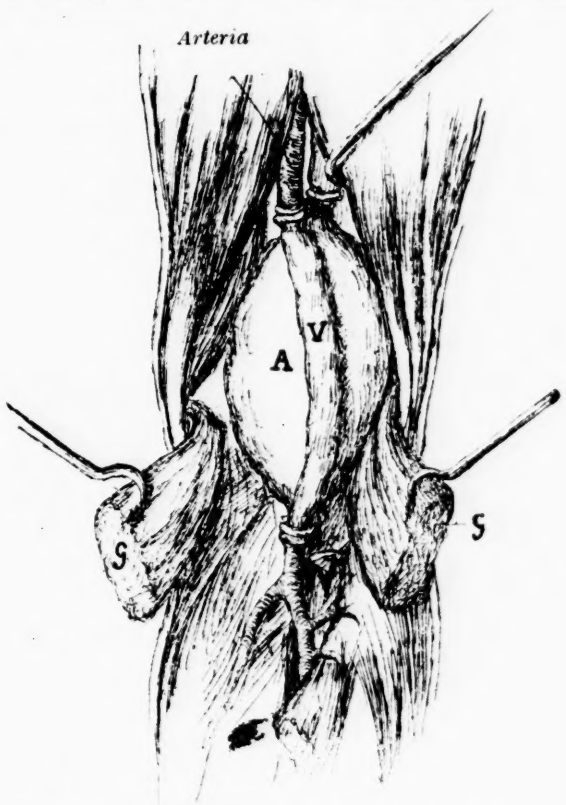
The medical profession is bound to be more than clean and pure and square, more than scientific, and more than sympathetic. It must be steady, cheerful, courageous, optimistic and confident. It is bound to put courage into people to the end that doctor and patient may work together in meeting exigencies and finding the way back to normal health. Half the worth of half the doctors is in their buoyant and bracing temperament.

The medical profession is more than all that; it is a patriotic profession. It is expert on the principles which the state must observe to be healthful and concerning the practices which society must prevent if we are to live in crowded settlements with any degree of comfort and safety. We look to this profession to set up the machinery which may assure the common health and to provide schools, laboratories and hospitals, always expensive, which will make modern scientific knowledge available to the mass and meet the needs of the many who must be overtaken inevitably by accident and disease under the swiftly moving and dangerous conditions of our complex life.

Chloroform Anesthesia.—A. Wilson (*Medical Chronicle*, August, 1906), discusses certain types of accidents from chloroform, which are not well recognized, directing attention particularly to two points. 1. Serious failure of the circulation and impending dissolution are indicated, not by gradual cessation of the respirations, but by exaggerated respiratory movements. 2. In a large class of cases, raising the patient into the sitting position is a most powerful aid toward recovery. Attention was first directed to this procedure and to the reasons for it by Dr. Leonard Hill. These chloroform accidents may result from: 1. Exaggerated action of the muscles in the stage of excitement actively interfering with respiration and circulation. 2. Paralysis or loss of tone of the accessory respiratory muscles so deranging the patency of the respiratory passages that respiration is seriously interfered with. Circulation is also hampered by deficient aeration of the blood and engorgement of the right side of the heart. 3. The specific paralyzing action of the drug on the fundamental nerve centers in the medulla. These accidents happen from some interruption in the orderly progressive course of the narcosis, whereby the circulation or respiration is paralyzed at an early stage of the administration. In the first class of accidents extreme muscular exertion caused by

exciting dreams results in sudden heart failure, cyanosis, possibly lividity, with deep, sometimes stertorous, breathing. The signs of danger are the sudden cessation of the struggles and the deep inspirations, associated with dilated pupils and twitching of the arms. The patient should be raised into a sitting position, and the thorax compressed while he is in that position. By alternately raising and lowering the patient, and the steady practice of artificial respiration the whole time, in the majority of cases recovery will ensue, provided always that treatment is begun promptly, whereas if the patient is kept in the recumbent position the danger is increased. In accidents of this class the onset of the failure of circulation is sudden, and the cause mainly due to the paralyzing action of the chloroform on the heart, and partly to the obstruction to the respiration impeding the circulation. It occurs at an early stage of the administration, often before the patient is deeply under. Cases of the second class occur in the later stages of administration from some obstruction to the respiration such as a faulty position of the head and are indicated by less pronounced symptoms. Still Wilson is convinced that if these cases of so-called primary respiratory paralysis were carefully observed, an acceleration of the respiration or signs of increased respiratory activity would be found to precede the final paralysis of circulation and respiration. The symptoms of danger are increased pallor of the face, dilatation of the pupils, exaggerated respiratory efforts, and absence of the pulse. The treatment is the immediate application of artificial respiration, removal of the obstruction to the air passages, and raising the patient into the sitting position to empty the heart. The specific toxic action of chloroform is usually shown first by its action on the circulation and especially on the vasomotors. By this vasomotor paralysis blood accumulates in the splanchnic area and the patient is practically bled into his own vessels and dies with all the symptoms of sudden hemorrhage. In a typical example there is sudden increased activity of the respirations, pallor, dilatation of the pupils and failure of the pulse. Wilson thinks that quickening of the respiration is evident before any change can be detected in the pulse. This condition may occur at any stage of the administration. The symptoms vary according to the degree of anesthesia reached and the condition of the patient. If it occurs early the suddenly-produced anemia will give rise to anemic convulsions. With increased narcosis the muscular disturbance is less, but there is always increased activity of the respiration. This is a gross sign that can not be overlooked, though it is nearly always misinterpreted, he declares. The indications for treatment are to encourage the flow of blood to the heart and nerve centers, to stimulate the heart to renewed contractions, and to restore the blood pressure. With this object in view the patient's head should be placed in a dependent position, the end of the table raised, and energetic artificial respiration performed. Artificial respiration should be applied in such a way that the chest is firmly compressed, so that some pressure is brought to bear on the heart; the intention being not so much to get air into the chest as to stimulate the heart and to raise the blood pressure. The patient ought also occasionally to be raised into the sitting position to prevent the blood stagnating in the vessels of the brain. Prompt treatment, Wilson states, offers good chance of recovery, but exhaustion and rigid chest walls are unfavorable to success. The failure of circulation is so sudden that there is little prospects of drugs being absorbed in time to be of any use. It is better, therefore, Wilson thinks, to rely on artificial respiration.

Substitution of Vein for Artery in Aneurism.—The *Siglo Medico*, Sept. 8, 1906, contains an illustrated description of the successful treatment of a popliteal aneurism by plastic substitution of the popliteal vein for the artery. The operation was performed by J. Goyanes, professor of surgery at Madrid, who credits the idea to Prof. San Martin of Madrid, in 1902. This is the first time it has been applied in the clinic, but experiments on animals had amply demonstrated its feasibility. It has the advantage over other methods, Goyanes says, that the circulation through the artery is retained without trusting to collateral circulation. The sacrifice of the vein is comparatively unimportant at most points where aneurisms are liable to occur. The patient in the present case was a woman of 41, with an extensive fusiform aneurism of the left popliteal artery, considerable arteriosclerosis and a history of syphilis and some alcoholism. The operation included ligature of the artery above and below the aneurism, with compression above. The vein was also ligated above and below the level of the aneurism, and both artery and vein were cut inside the ligatures. The central stump of the artery was then united with the peripheral stump of the vein above the aneurism, and again a similar anastomosis was done below the aneurism. The latter was thus cut off completely from the circulation which passed through the interposed tunnel of vein which lay along the aneurism like a bridge over it. The stumps were sutured by being drawn into the shape of a prism by Carrel's technic. The artery was clamped with forceps above and below the seat of the operation. The lower forceps were taken off first, and then the ones above the aneurism, and lastly the digital compression of the femoral artery in Scarpa's triangle. The blood rushed briskly through the interposed tunnel, and circulation was restored throughout the leg. A fine stream of blood issued



Method of Substitution of Vein for Aneurismal Artery.

from a small accidental puncture hole in the vein, but was arrested at once with a suture. The nerve had been found adherent to the aneurism, which explained the pain previously experienced. The wound healed smoothly, although there was a trifle of suppuration for a few days, evidently due to infection of some gelatin which had been injected as a last resort before attempting surgical intervention. Goyanes thinks that this double arteriovenous anastomosis may possibly have a brilliant future. It might be supplemented by extirpation of the aneurism according to Purmann's technic, especially in case the vein is adherent. The internal saphena seems amply able to take charge of the return circulation in the limb. In the illustration reproduced, A represents the aneurism, V the bridge of vein interposed in the artery in place of the aneurism, and V′ the ligated vein below. Goyanes reviews the various other methods of anastomosis of blood vessels in vogue, and states that he has used the Payr technic of anastomosis over a cylinder of absorbable magnesium and

found it very safe and simple. The chief drawback is that several millimeters of the vessel have to be sacrificed. His comments on the Matas method indicate that he is not fully acquainted with the principles that govern the technic, or the clinical evidence that has already accumulated in its favor. (See THE JOURNAL, Sept. 29, 1906, pages 990, 1017 and 1019.)

Application of Physical Chemistry to Pharmacology.—The importance of physical chemistry to the pharmacologist and physician is shown by T. S. Price in the *Pharmaceutical Journal*, July, by illustrations drawn from the comparative toxicity of different salts as indicated by their power to kill anthrax spores. It is found that mercuric cyanid is far less poisonous than mercuric chlorid, although we should expect the contrary, because it contains the radical of the very poisonous hydrocyanic acid. The explanation of the apparent anomaly is found in the fact that the electrolytic dissociation of the cyanid is less than that of the chlorid. When a compound such as chlorid sodium or sulphate sodium is dissolved in water it separates to a large extent into atoms or groups of atoms, one positive and the other negative, which pass to opposite poles when acted on by the electric (galvanic) current and which, therefore, have been named negative and positive ions, and the process of separation in this way has been called ionization or electrolytic dissociation. A solution of chlorid of sodium contains a mixture of sodium ions and chlorin ions which the electric current separates, the positive sodium ions going to the negative pole and the negative chlorin ions appearing at the positive pole. In the case of sulphate of sodium the separation is into positive sodium ions and negative sulphate ions. The more concentrated the solution of a salt, the less the number of its molecules which separate into ions and the greater the dilution of a solution the more complete the ionization, i. e., the larger the proportion of the salt molecules which are broken up into ions. It has been found that acids which readily undergo ionization when in solution are more powerful as acids and have a correspondingly greater action on the tissues, as a rule, than those which ionize with difficulty. Thus hydrochloric acid ionizes readily and is a strong acid, while acetic acid ionizes less readily and is a weak acid. If in any way we could hinder the ionization of hydrochloric acid we could lessen its activity as an acid. For the weaker acids it appears that the extent of ionization decreases when a salt containing the same negative ion as that of the acid is added to the solution. The acidity of acetic acid is diminished by the presence of an acetate. Mercuric chlorid may be regarded in some respects as analogous to a weak acid. It is a compound of a comparatively weak positive ion with a strong negative one, and it exhibits an acid reaction to litmus paper. If an alkali chlorid is added to mercuric chlorid it is to be expected that the ionization of the mercuric chlorid will be restrained and hence its toxic activity reduced. Such is actually found to be the case, and the disinfectant power of the mercuric chlorid is diminished by the addition of an alkali chlorid such as sodium or ammonium chlorid in proportion to the amount of alkali chlorid added and to the strength of the solution. That is to say, the greater the dilution the greater the tendency to dissociation or ionization and the less the inhibition of ionization on account of the presence of sodium or ammonium chlorid. These additions, therefore, while increasing the solubility of the mercury salt, diminish to a limited extent its toxicity and disinfecting power. Practically, however, as the disinfectant is used in dilute solution a marked diminution of disinfectant power is not to be feared. Still more striking is the effect of the production of certain double salts of mercury or silver on the toxicity of these metals. Thus yellow mercuric oxid dissolves in potassium thiosulphate to form a solution containing a new combination which dissociates into potassium ions and those of a complex group containing each an atom of mercury. The mercury is no longer present as mercury ions and does not exert the activity of the ordinary mercury ion. The salt would be expected to be non-poisonous and such, in fact, is the case. Similarly the toxic effect of silver salts can be reduced by the addition of sodium thiosulphate: the Ag ion combines with the thiosulphate ion (S_2O_3) to form the complex ion AgS_2O_3, which is non-toxic.

Book Notices

PHYSIOLOGY AND THERAPEUTICS OF THE HARROGATE WATERS, BATHS AND CLIMATE. Applied to the Treatment of Chronic Disease by W. Bain, M.D. and W. Edgecombe, M.D. Cloth. Pp. 300. Price, $2.60 net. New York: Longmans, Green & Co, 1905.

This work is based on experimental research and clinical observation, and will be found of most value to those who wish to employ the particular spring referred to. The action and therapeutic value of all natural mineral waters, however, is made clear by the introductory chapter which discusses the chemical and physical action of the waters, both within the body and experimentally. This elementary review of osmosis and electrolysis gives the reader a very much clearer understanding of the subsequent exposition of mineral waters in general, the Harrogate waters in particular. Section 1 is devoted to the pharmacology and the physiologic and therapeutic action, and Section 2 classifies the baths. Section 3 discusses the factors which determine climate, as, for example, temperature, humidity, rain fall, sunshine, winds, etc. Features of the town are briefly described, sanitary conditions, etc. The final section of the book is devoted to a detailed description of the chronic diseases which may be treated by the waters, baths and climate. The authors have logically paved their way for the presentation in tabulated form of the great variety of diseased conditions which have been benefited by the spa treatments. Other factors in the treatment, such as diet, exercise and drug therapy have not been lost sight of. We are glad to note that exaggerated claims of results, which are so commonly made for a treatment so diversified in its application, find an unusually small place in this book.

PHYSIOLOGY OF THE NERVOUS SYSTEM. By J. P. Morat. Authorized English Edition. Translated and Edited by H. W. Syers, M.A., M.D., Physician to the Great Northern Central Hospital. With 265 Illustrations. Cloth. Pp. 680. Price, $7.50 net. Chicago: W. T. Keener & Co., 1906.

There is no subject in medicine which requires a more accurate knowledge of the anatomy and physiology than does the nervous system, in order to be able to reason out the pathologic conditions. The physiology of the nervous system, however intricate, must be fairly well understood by the teacher in order to aid the student to grasp this difficult subject. If this part of the student's instruction is neglected his interest in the clinical study of nervous diseases will necessarily be below the proper standard, as the pathologic reasoning must be based on a knowledge of the anatomy and physiologic relations of the parts involved.

In his researches and writings Morat has elucidated a great many theories and has given to the medical profession advances in the physiologic functions of the nervous system by going more deeply than former investigators into the functions of certain centers and, in some instances, by correcting the opinions of other writers. The chapter on "Superior Systemizations" is of special interest. The illustrations given are of value in connecting the clinical and pathologic findings with the physiology of the part involved. To those interested in the study of the diseases of the nervous system this work can be recommended.

HUMAN SEXUALITY, a Medico-Literary Treatise on the Laws, Anomalies, and Relations of Sex, with Especial Reference to Contrary Sexual Desire. By J. R. Parke, Sc.B., Ph.G., M.D. (Late Acting Assistant Surgeon, U. S. Army). Cloth. Pp. 476. Price, $3.00. Philadelphia: Professional Publishing Company, 1906.

This is a valuable addition to the literature on the subject. It is a readable volume, and, for most practitioners, will be found more satisfactory than many of the elaborate works which treat of the various phases of the subject in more detail. It presents a summary of what is known of the customs of all peoples as regards sexual selection, betrothal, marriage, divorce, etc., and the relation of the sex problem to modesty, vanity, poverty, wealth, morality, Christianity, civilization, virtue and the welfare of the race. In the main, the attitude of the author is judicial, broad-minded and helpful, but he has been led far astray in his endeavor to treat the subject with entire disregard of so-called prudery. Sexual matters should be treated with perfect frankness, particularly in a work for

physicians, but we can not justify the author in his facetious and flippant manner of telling unnecessary stories and of illuminating some pages with headlines of questionable wit. It is regrettable that an author whose general attitude is so evidently wholesome should thus mar his book. The publisher advertises that the book "reads like a novel," which, we submit, is hardly necessary in such a work.

CLINICAL BACTERIOLOGY AND HEMATOLOGY FOR PRACTITIONERS. By W. D. Emery, M.D., B.Sc., Clinical Pathologist to King's College Hospital and Pathologist to the Children's Hospital, Paddington Green. Cloth. Pp. 240. Price, $2.00. Philadelphia: P. Blakiston's Son & Co., 1906.

The present edition of this work contains many improvements over the previous edition. More space is given to the bacteriologic examination of materials from special parts of the body and to the examination of blood, especially with reference to the diagnosis of disease. The technical part of the work has been rewritten to include descriptions of new methods and new apparatus.

HYGIENE OF PREGNANCY. By W. B. Jennings, Ph. B., M.D., Attending Physician (O.P.D.), St. Mary's Free Hospital for Children. Flexible Leather. Pp. 48. New York: Medical Review of Reviews.

This monograph is intended for the use of nurses and expectant mothers. The language used is simple and few technical terms are used.

Marriages

JOSIAH CALVIN MCCRACKEN, M.D., Canton, China, to Miss Ellen Newpher of Cleveland, Ohio, September 12.

DAVID HENRY FITZGERALD, M.D., Fond du Lac, Wis., to Miss Lillian Virginia Gannon of Chicago, October 3.

J. H. DUNCAN, M.D., Killbuck, Ohio, to Miss Alberta Esther Dugan of Mechanic Township, September 19.

ANDREW MOYNIHAN, M.D., Sauk Center, Minn., to Miss Emma Collins of St. Paul, September 25.

HARRY R. BROWN, M.D., Chillicothe, Ohio, October 3.

Deaths

Eduardo Andrade, M.D. University of Georgetown, Medical Department, Washington, D. C., 1894; a member of the American Medical Association; bacteriologist of the State Board of Health of Florida; a member of the Duval County (Fla.) Medical Society, and one of the most brilliant and popular young practitioners of Jacksonville, Fla., died suddenly in New York City September 20, aged 33. The State Health Officer of Florida pays the following tribute to the memory of Dr. Andrade: "Words can not convey nor can human tongue express the grief which the State Board of Health feels in the loss of its talented associate, who, although young in years, nevertheless possessed the mental qualities of an accomplished and polished scholar and scientist, and typified in every act of life all the attributes of a Christian gentleman." The Jacksonville Board of Trade and the Duval County Medical Society appointed special committees to attend the funeral.

William K. Otis, M.D. College of Physicians and Surgeons in the City of New York, 1885; a member of the American Association of Genitourinary Surgeons, American Urological Association, New York Academy of Medicine, St. Luke's Alumni Association; Hospital Graduates Club; New York County Medical Society and Medical Association of the City of Greater New York; professor of genitourinary diseases in the New York School of Clinical Medicine; attending surgeon to St. Mark's Hospital and the West Side German Dispensary; consulting surgeon to the City Hospital and the Throat and Nose Hospital, died suddenly at his home in New York City, September 22, from pneumonia, aged 36.

Walter Clarke Jackson, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1852; a member of the Alabama State Medical Association before the Civil War, one of the reorganizers of the association in 1868, and for several years its treasurer; once president of the Medical and Surgical Society of Montgomery; one of the ten physicians who in 1872 organized the Social Medical Club in Montgomery, died at his home in Montgomery, September 22, after an illness of only three days, aged 79.

Albert R. Ong, M.D. Columbus (Ohio) Medical College, 1877, a member of the American Medical Association, one of the most prominent physicians of Martins Ferry, Ohio; for a number of years professor of mathematics and astronomy and vice-president of Richmond College; a member of the Board of Pension Commissioners and chief of the Volunteer Fire Department of Martins Ferry, died suddenly at his home in that city, September 22, from acute gastritis, aged 58.

Francis Perley Taylor, M.D. Pennsylvania Medical College, Philadelphia, 1857, L.R.C.P., Edinburgh, 1865, and F.R.C.P., Edinburgh, 1871; one of the founders and a constant patron of the Prince Edward Island Hospital, and for many years a member of the Charlottetown Board of Education; one of the most prominent and beloved practitioners of Prince Edward Island, died at his home in Charlottetown, September 17, after an illness of only half an hour.

Andrew Fine, M.D. Toland Medical College, San Francisco, 1866; one of the best known practitioners of Oakland, Cal.; for 24 years a member of the California State Board of Pension Examiners; consulting physician to the Home for the Adult Blind, and for several terms a member of the Board of Education of Oakland, died at the home of his son in that city, September 20, after a long illness, aged 63.

John M. Buckingham, M.D. Jefferson Medical College, Philadelphia, 1852; a member of the American Medical Association, Ohio State Medical Association, Southwestern Ohio Medical Society and Clark County Medical Society; a member of the staff of the Springfield City Hospital, and health officer of Springfield, Ohio, died suddenly in that city, September 27.

Thomas H. Helsby, M.D. University of Maryland School of Medicine, Baltimore, 1859; surgeon in the Fifth Army Corps during the Civil War, and for 30 years thereafter a practitioner in Williamsport, Pa., died at his home in Baltimore, September 26, aged 71.

Thomas F. M. Phelan, M.D. Bellevue Hospital Medical College, New York City, 1882; city physician of Orange, N. J., in 1891, and health officier, died from general paresis, at a sanitarium in Worcester, Mass., September 11, after an illness of several years.

William B. Foster, M.D. Medical Department of the University of Louisiana, New Orleans, 1850; one of the oldest and most highly respected physicians of Hope, Ark., died September 14, at a sanitarium in Texarkana, after a surgical operation, aged 84.

Charles E. C. Beach, M.D. Fort Wayne (Ind.) College of Medicine, 1905; interne at Hope Hospital, Fort Wayne, in 1903 and 1904, died at his home in Coesse, Ind., September 20, from cerebral congestion, after a short illness, aged 27.

George S. Rittenhouse, M.D. Jefferson Medical College, Philadelphia, 1880, a member of the Cecil County Medical Society, died at his home in North East, Md., September 22, from tuberculosis, after a lingering illness, aged 49.

Samuel Wesley Lippincott, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1897, of Philadelphia, died at the University Hospital, September 22, from hemorrhage due to gastric ulcer, aged 36.

William D. Kerr (Years of Practice, W. Va.), for forty years a practitioner of that state, while making a professional call near his home at Huntington, Dec. 13, 1905, was struck by a railway train and instantly killed.

Thomas C. Dodson, M.D. New York University, New York City, 1849, of Mount Vernon, Texas, died suddenly September 18, at the home of his daughter in Tishomingo, I. T., from heart disease, aged 78.

Daniel M. Skinner, M.D. New York University, New York City, 1858; a surgeon in the Navy during the Civil War, died at his home in Belleville, N. J., September 26, from cerebral hemorrhage, aged 71.

G. W. Wilson, M.D. University of Nashville, Medical Department, 1902, of Westmoreland, Tenn., died at a hospital in Nashville, September 15, five days after an operation for appendicitis, aged 43.

Ambrose H. Martin, M.D. Jefferson Medical College, Philadelphia, 1885; for a number of years a practitioner of Pendleton, Ore., died in Portland, Ore., September 18, after a surgical operation.

Higgins C. Smith, M.D. Bellevue Hospital Medical College, New York City, 1869, died at his home in Broadwell, Ky., September 17, from disease of the stomach, after a long illness, aged 70.

James C. Miller, M.D. Jefferson Medical College, Philadelphia, 1885, of Jeannette, Pa., died at the Westmoreland (Pa.) Hospital, September 22, from pneumonia and uremia, aged about 50.

William J. Cox, M.D. Kentucky School of Medicine, Louisville, 1894, of Uniontown, W. Va., died at the North Wheeling Hospital, Wheeling, W. Va., from nephritis, September 15.

M. M. T. Hutchinson, M.D. Medical College of Georgia, Augusta, 1859, for three years a member of the School Board of Thomasville, Ga., died at his home in that city, August 21.

Richard Sanford, M.D. London (England) Hospital, 1849; assistant surgeon during the Yakima Indian War, died at his home in Glencoe, Ore., August 29, aged 83.

Albert L. Walker (Examination, Michigan) died from accidental poisoning, at his home in Ann Arbor, Mich., August 31, after an illness of two days, aged 57.

H. E. Babcock, M.D. Albany (N. Y.) Medical College, 1855, died at his home in New London, N. Y., September 20, after an invalidism of four years, aged 79.

J. Y. Campbell, M.D. Chicago Medical College, 1865, for 25 years a practitioner of Paxton, Ill., died at his home near Rochester, Ind., September 21.

George W. A. Collard, M.D. Hahnemann Medical College and Hospital, Chicago, 1880, died at his home in Bridgeport, Conn., September 18, aged 75.

Adam Orr, M.D. Queen's College, Cork, Ireland, 1862; M.R.C.S., Edinburgh, 1864; died at his home in Allegheny, Pa., September 25, aged 66.

William Jasper Packwood, M.D. University of Buffalo, Medical Department, 1876, died suddenly at his home in Buffalo, September 24, aged 54.

Oscar Alfred Fliesburg, M.D. College of Physicians and Surgeons, Chicago, 1885, died at his home in Minneapolis, Minn., September 12, aged 55.

George W. Davies, M.D. College of Physicians and Surgeons of Chicago, 1895, was found dead at his home in Waterloo, Wis., September 22.

Chauncey B. Howe, M.D. Syracuse (N. Y.) Medical College, 1861, of Seneca Falls, N. Y., died in the Geneva Hospital, August 27, aged 80.

Harvey Dunn, M.D. St. Louis Medical College, 1867, died at his home in Perry, Ill., September 11, after an illness of several years, aged 72.

Eva M. L. Scobell, M.D. Hering Medical College and Hospital, Chicago, 1899, died at her home in Chicago, September 11, aged 33.

J. J. Wilkinson, M.D. Philadelphia University of Medicine and Surgery, 1868, died at his home in Orland, Ind., September 6, aged 64.

Charles W. Pfeffer, M.D. Baltimore Medical College, 1883, died at his home in Baltimore, September 22, after a lingering illness.

William F. Wallace, M.D. Columbus (Ohio) Medical College, 1880, died at his home in Rochester, N. H., recently.

Deaths Abroad.

Hermann Cohn, M.D., the well-known ophthalmologist and hygienist, died at Breslau, September 14, aged 68. He began his scientific career with physics and chemistry, and then devoted himself to medicine, presenting theses in each of these branches of science. Since 1866 he has confined his efforts to ophthalmology and hygiene, and has won fame and honors in both. He has published more than 200 articles on subjects in these lines, besides a number of manuals and compilations of statistics, etc. His first important work was his famous study of the condition of the eyes of 10,060 school children, with suggestions for the hygiene of the eyes during school life. This was followed by "The School of the Future," "Tests for Vision," "How Can the School Combat Masturbation Among the Children"? etc. One of his latest communications proclaimed the efficacy of radium in treatment of trachoma.

O. Vierordt, M.D., professor of internal medicine and pediatrics at Heidelberg, died September 2, aged 50. He was stricken with cardiac paralysis while greeting the members of the German medical study trip as they were visiting his clinic on their rounds through Heidelberg.

W. Czermak, M.D., professor of ophthalmology at Prague, died September 8, aged 50. He has published numerous articles on his specialty, on the origin of glaucoma, corneal fistula, etc., besides a manual of ophthalmology and guide to operations on the eyes.

G. A. Morache, M.D., professor of legal medicine at Bordeaux, died recently, aged 69. He was sent by the French government to China and elsewhere on several special medical missions.

A. Högyes, M.D., director of the Pasteur Institute at Budapest, formerly professor of internal medicine, died September 7.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

INFORMATION WANTED REGARDING PUBLIC CARE AND TREATMENT OF INSANE.

SALINA, KAN., Sept. 24, 1906.

To the Editor:—I am looking for a book or publication which will give me some practical information regarding public care and treatment of our unfortunates. Will you kindly help me toward this end? O. D. WALKER, M.D.

COUNTER-IRRITANTS IN PNEUMONIA.

WARSAW, VA., Sept. 12, 1906.

To the Editor:—1. When are the following counter-irritants indicated in pneumonia: (a) Blisters in lobar pneumonia? (b) Mustard plasters, poultices or paste in bronchopneumonia?

2. Will statistics show a lower percentage of mortality or shorter duration of disease by their use? L.

ANSWER.—1. The question of the use of counter-irritants in pneumonia is one on which opinions differ widely. By many, the use of these remedial agents is regarded as entirely useless; others believe that particularly at the beginning of pneumonia, when there is severe pain, not only is relief from pain obtained by these local applications, but that in some way the course of the disease is modified. That pain may be relieved by the use of hot applications, poultices, plasters and blisters, we think can not be doubted. That lobar pneumonia or bronchopneumonia are modified in their course by such applications is not believed by clinicians generally; and often more harm than good is done by the pain and annoyance from the applications, from the mechanical interference with respiration caused by heavy poultices or plasters, and by alternate heating and chilling of the body due to poultices becoming cold. We know of no special indication for the use of these applications in broncho-pneumonia.

2. No.

TREATMENT OF "CANKER SORES."

LORAINE, ILL., Sept. 19, 1906.

To the Editor:—Will you kindly publish in THE JOURNAL a good treatment for canker sores of the mouth? X. Z.

ANSWER.—The expression "canker sores of the mouth" may cover a multitude of sins, from a dirty, sour nursing bottle causing sore mouth in an infant, to the mucous patches of syphilis. Therefore, a knowledge of the cause is of the first importance in the treatment. The cause may be purely local, as when a burn produces vesiculation in the mouth, or it may be practically entirely constitutional, as in syphilis. In the usual case, as seen in infants and children, a combination of both conditions commonly exists, and the more obstinate the case the more influential the constitutional element. Of the local causes, sour and improper foods, with a lack of cleanliness of the mouth, play the most important rôle. Of the constitutional conditions, scurvy, rickets, syphilis, the depressed state following the acute infectious diseases, etc., are the most important. The treatment, therefore, must be both local and general. The food should be pure and sweet and such as the child can properly digest. It should be given cool because warm drinks irritate the mouth more than cold ones. With a clean camel's hair brush or fresh cotton swab the spots may be touched gently but thoroughly with a solution of from 0.5 per cent. to 1 per cent. of permanganate of potassium or a solution of from 1 to 2 per cent. of nitrate of silver. If the pain is so severe that the child can not be made to take any nourishment the sore spots may be carefully touched with a 2 per cent. solution of cocain, which will deaden the pain for the time being so that the child will nurse. This, of course, should only be used by the physician himself or by a perfectly competent trained nurse under his direction. A diet suitable to the age and condition of the child, at times with tonics, should be prescribed for the general condition. Syphilis, of course, requires its own specific treatment.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending September 29, 1906:

Kirby-Smith, R. M., asst.-surgeon, left Army General Hospital, Presidio of San Francisco, on 30 days' sick leave of absence, with permission to apply for two months' extension.

Hoff, John Van R., asst.-surgeon-general, relieved from duty as chief surgeon, Dept. of the Missouri, and will proceed to San Francisco, and take transport to sail Nov. 5, 1906, for the Philippine Islands, and on arrival at Manila will report in person to the commanding general, Philippines Division, for assignment to duty.

Girard, Joseph B., asst.-surgeon-general, relieved from duty as chief surgeon, Philippines Division, and will proceed to San Francisco, on transport sailing from Manila in December, 1906, reporting on arrival in the United States to the Military Secretary of the Army for further orders.

Rhoads, Thomas L., asst.-surgeon, relieved from duty at U. S. Military Academy, West Point, N. Y., and ordered to Fort Crook, Neb., for duty.

Smith, Herbert M., asst.-surgeon, advanced to the rank of captain from Sept. 20, 1906.

Cox, Walter, asst.-surgeon, leave of absence extended two months.

Hoff, John Van R., asst.-surgeon-general, relieved from duty at camp of instruction at Fort Riley, Kan., and will return to his proper station at Omaha.

Barlett, C. J., asst.-surgeon, advanced to the rank of captain, from September 21.

Jones, Harold W., asst.-surgeon, will accompany 14th Cavalry from Sequoia and the General Grant national parks, to Presidio of Monterey, Cal., and report, on arrival, for temporary duty. Also to report by letter to commanding general of the department for further orders.

Carter, Wm. F., surgeon, granted leave of absence for one month, to take effect about October 6, with permission to apply for one month's extension.

Davis, Wm. B., deputy surgeon general, left Headquarters, Department of the Lakes, Chicago, on 21 days' leave of absence.

Ford, Clyde S., asst.-surgeon, will repair from New York City to Washington, D. C., and report in person to the Military Secretary of the Army for instruction in the matter of personal identification record.

Koerper, C. E., asst.-surgeon, granted thirty days' leave of absence.

Lynch, Charles, surgeon, general staff, leave of absence extended fifteen days.

Love, Albert G., asst.-surgeon, will accompany troops from Yosemite National Park to Presidio of San Francisco, on arrival at the latter post to report for temporary duty, also report in person to the commanding general, Department of California, for further orders.

Wakeman, Wm. J., surgeon, left Fort Thomas, Ky., on thirty days' sick leave of absence.

Wadhams, S. H., asst.-surgeon, will accompany Companies B and D, 4th Infantry from Fort Slocum, N. Y., to Fort Mackenzie, Wyo., instead of First Lieut. James D. Fife, asst.-surgeon, previously assigned to this duty.

Morris, Samuel J., asst.-surgeon, ordered to proceed from Fort Schuyler, N. Y., to New York City, and report in person to commanding officer, U. S. Army Transport *Sumner* for duty as transport surgeon.

Shellenberger, James E., contract surgeon, granted an extension of two months to his sick leave of absence.

Hutson, T. Ogier, contract surgeon, returned to Fort McPherson Ga., from temporary duty at Fort Moultrie, S. C.

Hereford, John R., contract surgeon, ordered from Fort Caswell, N. C., to Fort Screven, Ga., for temporary duty.

Hasseltine, Hermon E., contract surgeon, ordered from Bristol, Vt., to Fort Thomas, Ky., for duty.

Myers, William H., contract surgeon, relieved from duty at Washington Barracks, D. C., and ordered to the Army Medical School for a course of instruction.

Johnson, Howard H., contract surgeon, relieved from duty at the Army General Hospital, Washington Barracks, D. C., and ordered to the Army Medical School for a course of instruction.

Macy, Fred S., contract surgeon, relieved from duty at Fort Adams, R. I., and ordered to the Army Medical School, Washington, D. C., for a course of instruction.

The following contract surgeons have been ordered from the places designated to Washington, D. C., for a course of instruction at the Army Medical School: Rukke, Guy V., Ann Arbor, Mich.; Bryan, Ray W., St. Louis; Pillsbury, Henry C., Boston; Christie, Arthur C., Clymer, N. Y.; Gostin, Bernard S., Macon, Ga.; Bartlett, William K., Minneapolis, and King, Edgar, Van Buren, Ark.

Hogan, David D., contract surgeon, relieved from duty at Fort Hamilton, N. Y., and temporary duty at Fort Jay, N. Y., and ordered to Fort Schuyler, N. Y., for duty.

Stone, Frank P., dental surgeon, returned to duty at Fort Sam Houston, Texas, from leave of absence.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending September 29, 1906:

Bell, W. H., surgeon, to special duty in the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Du Bruler, J. P., asst.-surgeon, detached Navy Yard, Washington, D. C., etc.: to special duty in the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Benton, F. L., surgeon, detached Naval Hospital, Navy Yard, Pensacola, Fla., to the *Texas*.

Langhorne, C. D., surgeon, to the *Brooklyn*.

Freeman, G. F., P. A. surgeon, to duty Naval Hospital, Portsmouth, N. H.

Webb U. R., P. A. surgeon, detached Naval Hospital, Portsmouth, N. H., to the *Brooklyn*.

Bachus, J. W., P. A. surgeon, detached U.S.R.S. *Franklin*, Navy Yard, Norfolk, Va., to the *Texas*.

Moore, A. M., surgeon, retired, to Navy Recruiting Station, Memphis, Tenn.

Page, J. E., surgeon, to Naval Hospital, Norfolk, Va.

Tolfree, H. M., P. A. surgeon, detached Naval Hospital, Norfolk, Va., to the *Connecticut*.

Taylor, E. C., asst.-surgeon, detached U.S.R.S. *Hancock*, Navy Yard, New York, N. Y., to duty Naval Hospital, New York.

Rennie, W. H., asst.-surgeon, detached U.S.R.S. *Lancaster*, Navy Yard, League, Island, Pa., to duty Naval Hospital, Pensacola, Fla.

Lovering, P. A., medical inspector, detached from duty as member of Naval Medical Examining Board, to duty in command of Naval Hospital, Norfolk, Va.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending Sept. 26, 1906:

Gassaway, J. H., surgeon, granted leave of absence for three days.

White, J. H., surgeon, granted leave of absence for seven days from Sept. 23, 1906.

Guiteras, C. M., surgeon, granted leave of absence for one day.

Wertenbaker, C. P., surgeon, granted extension of leave of absence for seven days from Sept. 22, 1906.

Stimpson, W. C., surgeon, granted leave of absence for two days from Sept. 21, 1906.

Lavinder, C. H., P. A. surgeon, relieved from temporary duty at Detroit and directed to proceed to Stapleton, N. Y., reporting to the Medical Officer in Command for duty and assignment to quarters.

Grubbs, S. B., P. A. surgeon, granted leave of absence for two days.

Hobdy, W. C., P. A. surgeon, detailed to represent the Service at the semiannual meeting of the California Public Health Association at San Jose, Cal., Oct. 10, 1906.

Ward, W. K., asst.-surgeon, granted leave of absence for seven days from Sept. 24, 1906, under the provisions of Paragraph 191 of the Regulations.

Gibson, L. P., acting asst.-surgeon, granted leave of absence for five days.

James, W. F., acting asst.-surgeon, leave of absence granted without pay to Acting Assistant Surgeon James for fifteen days from August 31, 1906, revoked.

Scott, E. B., pharmacist, granted leave of absence for twenty-three days from Aug. 23, 1906, on account of sickness.

Scott, E. B., pharmacist, granted leave of absence for twenty-four days from Sept. 20, 1906.

Slough, Charles, pharmacist, relieved from duty at Honolulu, T. H., and directed to proceed to San Francisco, reporting to the Medical Officer in Command for duty and assignment to quarters.

Beck, J. E., pharmacist, relieved from duty at San Francisco, and directed to proceed to Honolulu, T. H., reporting to Chief Quarantine Officer for duty and assignment to quarters.

Iltis, George W., pharmacist, granted leave of absence for thirty days from Sept. 22, 1906.

Hall, L. P., pharmacist, granted leave of absence for seven days from Sept. 23, 1906, under Paragraph 210 of the Regulations.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service during the year ended September 28, 1906:

SMALLPOX—UNITED STATES.

Indiana: South Bend, Sept. 16-22, 1 case.
Kentucky: Lexington, Sept. 8-15, 1 case.
Louisiana: New Orleans, Sept. 8-15, 7 cases (6 imported).
Ohio: Cincinnati, Sept. 14-21, 1 case.
Pennsylvania: Altoona, Sept. 15-22, 1 case, 1 death.

SMALLPOX—FOREIGN.

Africa: Cape Town, Aug. 4-18, 8 cases.
Brazil: Bahia, Aug. 11-18, 6 cases; Pernambuco, Aug. 1-15, 3 deaths; Rio de Janeiro, Aug. 12-Sept. 2, 10 cases.
Chile: Antofagasta, July 29-Aug. 12, 39 cases, 4 deaths; Coquimbo, 30 cases, 1 death; Talcahuana, present.
India: Bombay, Aug. 14-28, 4 deaths; Calcutta, Aug. 4-11, 2 deaths; Karachi, Aug. 12-26, 5 cases, 2 deaths; Madras, Aug. 4-17, 3 deaths.
Russia: Moscow, Aug. 18-25, 2 cases; Odessa, Aug. 25-Sept. 1, 6 cases; St. Petersburg, Aug. 18-25, 2 cases, 1 death.
Siberia: Vladivostok, July 28-Aug. 4, 1 case.
Spain: Barcelona Sept. 1-10, 8 deaths; Seville, Aug. 1-31, 31 deaths.
Turkey: Constantinople, Aug. 26-Sept. 9, 2 deaths.

YELLOW FEVER.

Cuba: Habana, Sept. 27, 2 cases.
Ecuador: Guavaquil, Aug. 1-31, 9 deaths.
Mexico: Merida, Sept. 2-15, 5 cases, 4 deaths; Tuxtepec, 4 cases, 3 deaths; Vera Cruz, 2 cases, 1 death.

CHOLERA—INSULAR.

Philippine Islands: Manila, July 28-Aug. 4, 38 cases, 30 deaths; Provinces, July 28-Aug. 4, 731 cases, 534 deaths.

CHOLERA—FOREIGN.

India: Bombay, Aug. 14-28, 89 deaths; Calcutta, Aug. 4-17, 8 deaths; Madras, 19 deaths; Rangoon, Aug. 11-18, 1 death.

PLAGUE—INSULAR.

Hawaii: Honolulu, Aug. 18-25, 1 case, 1 death.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Aug. 12-Sept. 2, 8 cases, 4 deaths; Pernambuco, Aug. 1-15, 2 deaths.
Egypt: Alexandria, Aug. 28-29, 2 cases, 4 deaths; Suez, Aug. 24-25, 2 deaths.
India: General, July 28-Aug. 11, 2,321 cases, 167 deaths; Bombay, Aug. 14-28, 61 deaths; Calcutta, Aug. 4-11, 2 deaths; Karachi, Aug. 12-26, 10 cases, 8 deaths; Rangoon Aug. 4-18, 205 deaths.
Japan: Formosa, Aug. 10-20, 3 cases, 3 deaths.
Peru: Lima, Aug. 18-25, 7 cases, 4 deaths; Mollendo, 1 case, 1 death; Paita, 3 cases, 2 deaths.

State Boards of Registration

COMING EXAMINATIONS.

GEORGIA Board of Medical Examiners (Regular), Capitol, Atlanta, October 9. Secretary, E. R. Anthony, Griffin.

ARKANSAS State Medical Examining Board, Little Rock, October 9. Secretary, J. P. Runyan, Little Rock.

KANSAS State Board of Medical Registration and Examination, State House, Topeka, October 9. Secretary, F. P. Hatfield, Grenola.

MICHIGAN State Board of Registration in Medicine, Lansing, October 9. Secretary, B. D. Harison, Detroit.

MISSISSIPPI State Board of Health, The Capitol, October 9. Secretary, J. F. Hunter, Jackson.

DISTRICT OF COLUMBIA Board of Medical Supervisors, Washington, October 11. Secretary, Geo. C. Ober, Washington.

NEW JERSEY State Board of Medical Examiners, Trenton, October 16-17. Secretary, J. W. Bennett, Long Branch.

TEXAS State Board of Medical Examiners, Houston, October 16-18. Secretary, T. T. Jackson, San Antonio.

FLORIDA Board of Medical Examiners (Regular), Jacksonville, October 17-18. Secretary, J. D. Fernandez, Jacksonville.

ILLINOIS State Board of Health, Great Northern Hotel, Chicago, October 17-19. Secretary, J. A. Egan, Springfield.

LOUISIANA State Board of Medical Examiners, New Orleans, October 19-20. Secretary, F. A. Larue, New Orleans.

KENTUCKY State Board of Health, Louisville, October 23. Secretary, J. N. McCormack, Bowling Green.

INDIANA Board of Medical Registration and Examination, Indianapolis, October 23-25. Secretary, W. T. Gott, Indianapolis.

Nebraska May Report.—Dr. George H. Brash, secretary of the Nebraska State Board of Health, reports the written examination, held at Lincoln, May 29-30, 1906. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 49, of whom 36 passed and 13 failed. Twenty-eight reciprocal licenses were granted. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Bennett College, Eclec. Med. and Surg., Chicago	(1906)	87.2
Central Med. Coll., St. Joseph	(1905)	78.3
American Med. Coll., St. Louis	(1906)	79.3
St. Louis University (Marion-Sims-Beaumont Med. Coll.)	(1896)	78.5.
Lincoln Med. Coll.	(1906)	75.1, 77.8, 81.7, 84.7
University of Nebraska	(1906)	81, 83.8, 84, 85.2, 92.2, 94.2
Creighton Med. Coll., (1905) 77.6; (1906) 76.2, 76.3, 76.4, 76.5, 76.7, 79, 79.7, 80.1, 80.2, 80.5, 80.6, 80.7, 82.2, 82.5, 83, 84, 85.6, 85.6, 85.7, 86.2, 89.5.		

FAILED.		
Central Med. Coll.	(1905)	46.8, 74.3
Creighton Med. Coll. (1905) 72; (1906) 57.7, 63.7, 70.3, 71.1, 72.2, 72.6, 73.8.		
University of Nebraska	(1905)	50.5, 62.1, 70.5

LICENSED THROUGH RECIPROCITY. College.	Year Grad.	Reciprocity with.
Northwestern University	(1893), (1905)	Illinois
Hahnemann Med. Coll., Chicago	(1878), (1897)	Iowa
Hahnemann Med. Coll., Chicago	(1904)	Illinois
Chicago Homeopathic Med. Coll.	(1889)	Iowa
Rush Med. Coll.	(1904)	Illinois
Bennett Coll. Eclec. Med. and Surg., Chicago	(2, 1906)	Illinois
Jenner Med. Coll., Chicago	(1904)	Illinois
American Coll. of Med. and Surg.	(1906)	Illinois
Hering Med. Coll.	(1906)	Illinois
Illinois Med. Coll.	(1905)	Illinois
University of Iowa	(1905)	Iowa
Sioux City Coll. of Med.	(1905)	Iowa
College of P. and S., Baltimore	(1881)	Iowa
Barnes Med. Coll.	(1906)	Illinois
Ensworth Central Med. Coll.	(1906)	Kansas
Creighton Med. Coll.	(1900), (1902)	Iowa
Lincoln Med. Coll.	(3, 1906)	Kansas
Cincinnati Coll. of Med. and Surg.	(1877)	Iowa
Omaha Med. Coll.	(1902)	Iowa
University of Pennsylvania	(1893)	Iowa
Meharry Med. Coll.	(1895)	Kentucky
Trinity University, Toronto	(1902)	Michigan

Michigan June Report.—Dr. B. D. Harison, secretary of the Michigan State Board of Registration in Medicine, reports the written examination, held at Ann Arbor, June 12-14, 1906. The number of subjects examined in was 14; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 71, of whom 68 passed and 3 failed. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Howard University	(1905)	81.3
American Med. Miss. Coll	(1906)	85.4
University of Michigan, (1889) 88.8; (1904) 84.5, 87; (1905) 85, 87.7, 90.7; (1906) 82.5, 84.3, 86.3, 87, 87.6, 88, 88.1, 88.2, 88.4, 88.4, 88.6, 88.6, 88.8, 89.3, 89.4, 89.6, 89.6, 89.8, 89.9, 89.9, 89.9, 90.3, 90.4, 90.5, 90.7, 91.3, 91.8, 92.2, 92.2, 92.3, 92.3, 93, 93.1, 95, 97.		
University of Michigan, Homeo. Dept. (1906) 79.7, 81.9, 83, 84.3, 84.7, 86.9, 86.9, 87.1, 87.3, 88.5, 89, 90.2.		
Grand Rapids Med. Coll.	(1906)	76.3, 90.3, 93.2
Saginaw Valley Med. Coll.	(1901)	84.1
Detroit Coll. of Med.	(1903)	81.4
University of Missouri	(1906)	88.7
Dartmouth Med. Coll.	(1906)	84.6
New York Homeo. Med. Coll.	(1906)	83.8
Miami Med. Coll.	(1895)	75.2
Jefferson Med. Coll.	(1904) 94.5; (1906)	87.3
Trinity Med. Coll., Toronto	(1901)	77.2
Royal University, Turin, Italy	(1901)	79.5

FAILED.		
Chicago Med. Coll.*	(1872)	65.6
Meharry Med. Coll.	(1905)	72.5
McGill University, Montreal	(1897)	71.8

* Now the Northwestern University Medical School.

Society Proceedings

COMING MEETINGS.

Colorado State Medical Society, Denver, Denver, Oct. 9-11.
Delaware State Medical Society, Wilmington, Oct. 9.
Medical Society of Virginia, Charlottesville, Oct. 9-11.
Kentucky State Medical Association, Owensboro, Oct. 10-12.
Vermont State Medical Society, Barre, Oct. 11-12.
American Association of Railway Surgeons, Chicago, Oct. 17-19.
Mississippi Valley Medical Association, Hot Springs, Ark., Nov. 7-8.
Southern Surg. and Gyn. Assn., Baltimore, Dec. 11-13.
American Public Health Assn., Mexico City, Dec. 3-7.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Nineteenth Annual Meeting, held at Cincinnati, Sept. 20-22, 1906.

(*Continued from page 1045.*)

Peritoneal Adhesions.

DR. ROBERT T. MORRIS, New York City, mentioned as favorite fields for chronic peritoneal adhesions the region of the cecum and appendix, the gall bladder, the sigmoid region, and pelvis. The greatest amount of disturbance calling for attention on the part of the surgeon comes from the region of the gall bladder, because the organs in this region are more movable than those elsewhere, such as the liver and diaphragm, which move with every inspiration and pull on the adhesions and the stomach, which is moving constantly. Next in the order of importance is the group of adhesions in the region of the cecum and appendix. Adhesions in the pelvic region, which, although extremely common, do not call for so much interference on the part of the surgeon as do the other groups of adhesions, for the reason that the viscera involved rest on the pelvic floor, and are subject to such constant and varying degrees of friction. Adhesions about the sigmoid give rise to comparatively little disturbance.

As to treatment, there are certain instances that do not call for much surgical attention. In these cases the minor psychoses should be ruled out. As to the method of treating these cases, he first began by simply separating them. He tried rubbing them with oil for a while, without getting marked results; then he followed the plan of filling the peritoneal cavity with saline solution after operation. But this was not wholly satisfactorily, because the salt solution is absorbed too rapidly.

He then adopted the method of using the aristol film, because he noticed that when raw peritoneal surfaces are exposed to the air there is a tendency for a lymph coagulum to form. An insoluble material like aristol offers a mechanical obstacle to readhesion at that point. The tri-iodid of thymol offers the best mechanical protection. It makes a smooth coagulum with the lymph and remains for a long time. In rabbits it was still present after a year. The Cargile membrane prevents the recurrence of adhesions very regularly, although not completely sometimes. Sometimes the surgeon may have to repeat the operation. Dr. Morris expressed himself as unwilling to state which is the better of the two, the Cargile membrane or the aristol film. Both are distinctly valuable in their proper places.

Porro Cesarean Section for Pregnancy, with Complicating Fibroids.

DR. JAMES F. BALDWIN, of Columbus, Ohio, said statistics show that in cases of pregnancy complicated with fibroids, unless the latter are so small as to be negligible, a maternal mortality of over 30 per cent., and a fetal mortality of probably 50 per cent., is obtained. Porro Cesarean section, with proper surroundings and competent operator, should give a maternal mortality of only about 5 per cent., and practically no fetal mortality whatever. Hence this operation should be uniformly advised in this class of cases.

Uterine Fibroids Complicating Pregnancy.

DR. MARCUS ROSENWASSER, of Cleveland, Ohio, said the recent report of cases of uterine fibroids obstructing delivery, in which the lives of mother and child were seriously endangered in the effort to deliver by the natural channel, justified operators in reporting the cases relieved by Cesarean section for the purpose of establishing the latter as a safer and better method of saving both lives. The report of a Porro Cesarean section successfully terminated was made as an additional contribution to papers previously read before the association and published in its transactions of 1896 and 1899. In this case the pelvis was obstructed by an immovable subperitoneal fibroid located in the posterior wall of the lower uterine segment. The operation had been planned for the onset of labor at term, but owing to rupture of membranes and prolapse of cord, became an emergency operation at the beginning of the ninth month. Mother and child were saved.

DISCUSSION.

DR. E. GUSTAV ZINKE, Cincinnati, Ohio, delivered two women in whom tumor was discovered after delivery. The tumors were intramural, very small, one the size of a walnut, the other the size of a hen's egg. The first case he saw was one of interstitial fibroids which implicated the intrauterine wall. It had been in the hands of a midwife, and when she failed to deliver the woman a physician was called in to assist. This was twelve years ago. As it was impossible to effect delivery in the usual manner, Dr. Zinke was called in and did a Cesarean section. The fetus had been dead for some time, and the woman died within forty-eight hours of sepsis. Where pregnancy is far advanced and a fibroid tumor is recognized, it is an extreme source of danger to the woman, especially if the tumor is subperitoneal. He thinks Cesarean section gave the woman as well as the child the best chance for their lives.

DR. OSCAR H. ELBRECHT, St. Louis, Mo., mentioned a case of fibroid tumor complicating pregnancy at the fourth month. It was subperitoneal, and situated in the anterior uterine wall. He removed the tumor, and the woman went on to full term.

DR. ROBERT T. MORRIS, New York, operated for the removal of a subperitoneal fibroid at the fifth month of pregnancy in a patient who was having a miscarriage. He operated with a desperate chance of trying to save the child. The patient was nearly 50 years of age, her only pregnancy, and a great deal depended on the birth of the child in the family. The labor pains ceased after he had removed a fibroid about as large as his fist; she went on to full term and was delivered of a living child.

DR. EDWARD J. ILL, of Newark, N. J., did not think that every woman who has fibroids ought to have the uterus removed or a Cesarean section done. The indication should be drawn closely. If there is obstruction in labor, then operation is indicated. He has only once done a Cesarean section for fibroids.

DR. JOSEPH PRICE, of Philadelphia, said that these cases, when recognized early, particularly cases of pedunculated fibroids, if they fall into the hands of skilful operators, can be operated on and the fibroids removed, the patients going on to term, and without premature deliveries or abortions.

DR. FREDERICK BLUME, of Pittsburg, cited a case in which he did a supravaginal hysterectomy for a fibroid tumor complicating pregnancy. He mentioned one case in which there was a tumor an inch above the umbilicus, fluctuating, the size of a three months' pregnancy, and simulating an ovarian cyst. He operated and found that it was the uterus, seven months advanced in pregnancy, and the other was a fibroid tumor projecting into the pelvis. He sewed up the wound and subsequently delivered her of a nine-pound child, but took the liberty of removing the uterus, as she was 45 years of age. It was a breech presentation. The child was dead. The woman, however, got along very well. This case shows that fibroid tumors do not disappear after delivery. In this case the tumor grew in six months to such an extent that it became necessary to do a supravaginal hysterectomy. He does not advocate that any woman who has a fibroid complicating pregnancy should undergo a Cesarean section.

DR. HUGO O. PANTZER, of Indianapolis, cited a number of cases of fibroid tumors complicating pregnancy. He was called to see the first ten days after the woman had given birth to a child. She had developed fever, and at this time was passing a fibroid which had become gangrenous. In a second instance he was called to deliver a woman who had been in labor forty-eight hours. A large tumor was found located at the fundus, and within four days this tumor sloughed away. In the first case the sloughing fibroid was removed with forceps; the patient made a good recovery, and has since again become pregnant. In the second case the tumor gave evidence of sloughing on the third day after delivery, and within twenty-four hours he operated per vaginam, removed the fibroid, and the woman made a good recovery.

DR. J. HENRY CARSTENS, of Detroit, Mich., said that if a small fibroid is found in the cervix which causes symptoms, it can be removed per vaginam when the woman is pregnant, which will save her a severe labor. If the fibroid is a large one and situated higher up, and there is likelihood of its interference with labor, the tumor should be removed whether the woman is three or six months pregnant, thus saving her future trouble. If the uterus contains multiple fibroids and there is good reason to suspect considerable trouble on account of their interference with pregnancy, it is well to do either an abdominal or supravaginal hysterectomy, according to the nature of the case. If a Cesarean section is required and there is a very large fibroid to deal with, the fibroid should be removed and the uterus saved.

Abdominal Section for Trauma of Uterus.

DR. CHARLES E. CONGDON, of Buffalo, N. Y., related a case in which there was puncture of the non-puerperal uterus, with prolapse of the bowel; violent seizure and tearing away of sixteen inches of gut. Abdominal section, with intestinal anastomosis, was resorted to promptly, and the uterine laceration repaired and followed by recovery of the patient.

DISCUSSION.

DR. EDWIN WALKER, of Evansville, Ind., reported a case of rupture of the uterus with prolapse of the intestine. The woman had aborted at about the fourth month, and he was called to deliver the placenta. He used the uterine auger, with which he brought away the placenta, and before he realized it he had quite a large mass, which he found to be the intestine. A handful of intestine was presenting at the vulva. Dr. Walker replaced it in the vagina, applied a tight binder, removed the woman to a hospital, opened the abdomen, and found that thirty-one inches, with mesentery, were torn away. He resected the intestine, used a Murphy button, did not employ any sutures in the uterus, as the parts fell together so well, then closed the abdomen, and the patient made a good recovery. He also mentioned a case in which the uterus was punctured during a curettement.

DR. RUFUS B. HALL, of Cincinnati, believes that perforation of the uterus is more frequent than most men are willing to admit, especially in producing abortion. He does not believe that prolapse of the intestine is frequent in perforation of the uterus. He had an experience a few years ago that impressed on his mind forcibly that these cases run in groups. Within eight days he had five patients with perforated uteri who had produced abortions on themselves. These patients were suffering with various stages of infection. All of them were treated, when there was pus present, with vaginal section, and the pus emptied. Three patients recovered and two died.

DR. JAMES F. BALDWIN, of Columbus, related a case of punctured uterus, the result of an attempted abortion. There was an enormous amount of pus discharged through the vagina, and the woman promptly recovered.

DR. WALTER B. DORSETT, of St. Louis, Mo., said the cases of rupture or perforation of the uterus should be classified. If asked to attend a case in which there was perforation of the uterus, produced by an abortionist, he would not hesitate to operate. He has operated on three such cases, cleaning out the pus which was present, and putting in vaginal drainage. He recalled one case of rupture of the uterus in labor in which nothing was done. The intestine was pushed back and the woman made a very good recovery.

DR. JOHN YOUNG BROWN, of St. Louis, said that in spite of the teachings of military surgeons, civil surgeons were beginning to realize the importance of penetrating wounds of the abdomen. It did not matter whether the penetration was caused by the curette, bullet, or by stab wound, the consensus of opinion among civil surgeons is that all such wounds should be explored.

(To be continued.)

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

Fifteenth Annual Meeting, held in Buffalo, N. Y., Sept. 11-14, 1906.

(Concluded from page 1047.)

Technic of the Yellow-Fever Campaign.

ASSISTANT SURGEON WILLIAM C. RUCKER, U.S.P.H.&M.-H. Service, who was on duty in New Orleans last year during the yellow-fever epidemic and conducted a campaign against the disease in that place which was successful, although in his labors he contracted the yellow fever himself, described in detail the methods for suppression of an epidemic of yellow fever, which are based entirely on the mosquito dogma.

The three basic principles are that yellow fever is transmitted only by the *Stegomyia calopus* and not *Stegomyia fasciatia*, as has been commonly believed; that this mosquito is infected only by biting a yellow-fever patient during the first three days of the disease, and that the mosquito can not transmit the infection until a period of from 12 to 20 days (usually 14) has elapsed. The fundamental object, therefore, of such a campaign is to prevent the breeding of the stegomyia, to locate and to isolate all persons with yellow fever or with suspicious fever as early as possible in the disease to prevent the stegomyia from biting them and thereby becoming infected, and finally to destroy all infected stegomyia.

Stegomyia calopus is a domestic mosquito that breeds around human habitations. Cisterns, rain barrels or places where there is fresh, clean water are the preferred breeding places. In default of such places, however, it may deposit its eggs in foul or stagnant water. The mosquito is sly and persistent in its attacks on the human subject. It bites preferably just above the shoe tops. Only the female bites. The young mosquitoes bite only in daytime, but the adults bite in a darkened room or at night.

Dr. Rucker described in detail the supplies necessary for the attacks on stegomyia in its breeding places, the materials necessary for screening, etc., and the technic of this procedure. The location of those sick with fevers is not easy. The ignorant are prone to hide their sick in order that they may not be sent to the hospital or that their places of business may not be closed, while the better class act in a similar manner to avoid fumigation of their premises and notoriety. It is necessary, therefore, that the people of an infected city be kept under constant surveillance. The main support in all such cases must be the family physician. Cases should be reported early, as a patient is infective to mosquitoes only during the first three days of the disease. During this period the patient should be screened, or in other words, the mosquito should be protected from the patient. After screening the room, fumigation of the room and the surrounding premises is made. The officer should not treat nor offer advice regarding the treatment of patients. The axiom of the service is: "The patient belongs to his physician, the house belongs to the sanitary officer."

The sick are not isolated after the preliminary fumigation; they may receive visitors, but they are protected from mosquitoes. Funerals may be public. Business is not suspended, but places of public congregation are closed at night. Persons entering an infected town are obliged to give their names and city addresses to the division of train inspection. They are then inspected daily for five days. Persons leaving the city should be required to obtain health certificates from the sanitary bureau.

DISCUSSION.

DR. CHARLES P. WERTENBAKER, U.S.P.H.&M-H. Service, New York, said that every military surgeon may at some time be confronted by the problem of suppressing an outbreak of yellow fever, and he will then fully appreciate the detailed information such as has been furnished.

CAPT. S. C. STANTON, Ill.N.G., presented a resolution that copies of Dr. Rucker's paper be sent to the surgeons general of the various services, recommending that the article be distributed as a governmental publication, and that a copy of the resolution be forwarded to the surgeon general U.S.P.H.& M.-H.S. The resolution was unanimously adopted.

Economical Consumptive Sanatoria.

SURGEON PAUL M. CARRINGTON, U.S.P.H.&M.-H. Service, suggested an economical plan for consumptive sanatoria, with a description of a new tent house, proposed by himself and the architect, J. Ross Thomas, of the same service, which was read in the absence of the authors by Dr. Rucker. The authors appreciated the tendency in the past toward constructing expensive sanatoria, with costly systems of heating and ventilating, and appreciated also, incidentally, the liability of legislative bodies to make niggardly appropriations for such purposes. For this reason they have evolved a scheme for tent have sunshine or shadow at any time of day, inside or outside of his room. Each tent is 12 by 14 feet in area, and is intended to house two persons. The ceiling is 9 feet high, and the sides are closed for half that distance. The heat is furnished by a small iron stove. The colony of tent houses has, of course, its administrative building, mess hall, etc., and the authors claim for the scheme, which is now in operation at Fort Stanton, N. M., the advantages of convenience of grouping, flexibility, isolation and economy.

Sanitary Questions in the Navy.

MEDICAL DIRECTOR MANLY H. SIMMONS, U.S.N., in his paper, entitled "The Medical and Sanitary Questions Met in Everday Life on a Cruising Ship in the Navy," pointed out the difference between the soldiers of the old Navy and the new, the great divergence in the duties from the old days, when the sailors were needed to handle sails, and the present time, when machinery is in use for practically all purposes. He spoke of the great difficulty in keeping modern ships in clean and sanitary condition, on account of the complexity of construction, and mentioned the changes desirable from a sanitary point of view, and the manner in which the various emergencies aboard the modern cruising ship have been met.

Resuscitation of Persons Apparently Drowned.

ASSISTANT SURGEON JOHN W. TRASK, U.S.P.H.&M.-H. Service, prepared a paper, read by Dr. Rucker, reporting two cases of prolonged submergence under water in which the patients, after 23 and 30 minutes' submergence, respectively, were resuscitated by continuation of artificial respiration for nearly two hours. From these cases the author urges the practice of persistence in artificial respiration for at least two hours, in all cases of the apparently drowned before hope is abandoned, especially when the known submersion has been houses, inexpensively constructed, whereby the patient may less than 30 minutes or when the time of the submersion is in doubt.

Portable Rations for Soldiers.

MAJOR LOUIS LIVINGSTON SEAMAN, U.S.V.E., read a paper on "A Portable Ration for Soldiers in Battle and on the Field," which originally appeared in THE JOURNAL, May 26, 1906, page 1606, and to which he had added a number of observations

suggested by his later experiences in Africa, concerning the advisability of an increase in the ration of sugar, and the sustaining properties of the raisin.

DISCUSSION.

COL. W. GRANT MCPHERSON, R.A.M.C., took exception to Dr. Seaman's remarks in regard to the absence of enteric disease in the Japanese army. In a recent conversation with a Japanese officer, said he, he had been informed that there were 27,000 cases of dysentery and typhoid fever during the Russo-Japanese war, with 4,000 deaths from enteric fever alone. He did not agree with the optimistic views of the author and objected to the diet suggested, for the reason that in summer it fermented and in winter it froze.

DR. HAROLD D. CORBUSIER, Denver, spoke of the racial characteristics of the components of armies, which must be considered in the diet of all bodies of troops. An army should have a broad diet list on this account. He attached especial value to the use of bacon.

MAJOR W. H. W. ELLICOTT, Indian Medical Service, gave his experience regarding the diet of troops, especially in the tropics. He considered smoked and jerked meats of great value.

LIEUT.-COL. NATHAN S. JARVIS, N.G..N.Y., agreed with the essayist in the necessity for sugar in the diet of the soldier, and spoke of his experience while in the United States service, when maple sugar and raisins proved especially valuable to the soldier in long marches over arid plains.

DR. WILLIAM C. RUCKER, U.S.P.H.&M.-H. Service, stated his belief that diet was only the predisposing factor in the causation of beriberi, but had nothing to do with its causation.

MAJOR FLOYD S. CREGO, N.G..N.Y., doubted the disappearance of beriberi, which the author claimed, and asserted that the acute symptoms disappeared, but that a modified form remained, which had its manifestation in the neuritis and psychoses, which are fast filling up our asylums, penitentiaries and almshouses.

Entertainment.

The entertainment provided for the association included a reception at the Lafayette Hotel on Tuesday evening, a luncheon given by Dr. Lucien Howe, on behalf of the Buffalo Academy of Medicine, at his residence on Wednesday noon; a reception at the Buffalo Club, of which Dr. Roswell Park is president, on Wednesday evening; an excursion on the United States revenue cutter *Morrill* down the Niagara River to Niagara Falls; a trolley excursion down the Canadian side, returning through the gorge, and a luncheon at Niagara Falls, N. Y. The ladies were given luncheons at the various country clubs, automobile rides, receptions, etc.

BRITISH MEDICAL ASSOCIATION.

Seventy-fourth Annual Meeting, held in Toronto, Ontario, Aug. 21-25, 1906.

(*Continued from page 1048.*)

SECTION OF SURGERY.

In the introduction, SIR HECTOR C. CAMERON, M.D., the chairman, acknowledged the great and daily increasing debt that surgery owes to those on the western side of the Atlantic, and looked forward with keen anticipation to the benefits to accrue from intercourse with the Canadian and American surgeons present.

Prostatectomy.

DR. GEORGE A. BINGHAM, Toronto, in his introduction of the discussion on prostatectomy gave a description of the microscopic structure of the gland, showing that it lacks a true capsule and that definite lobes are absent. Embryologically, the prostate has been shown to be purely sexual in origin. The pathologic changes in hypertrophy were then taken up to show the relationship of the newly formed tissues to the remainder of the gland. If the modern prostatic enucleation is performed through the outer part of the gland, a portion of the prostate is left behind. In discussion of the treatment, he mentioned three classes of cases: The early cases, where the only symptom is obstruction. In these enucleation is advised with catheter life as an alternative; the very late cases, in which permanent drainage or Bottini's operation is advised; and the intermediate cases, in which enucleation should be performed. The author holds that neither the perineal nor the suprapubic operation meets all indications.

Ascites.

MR. SINCLAIR WHITE, F.R.C.S., Sheffield, in introducing the discussion on ascites, stated that ascitic effusion was largely passive and directly due to interference with the passage of blood through the hepatic terminals of the portal vein. Proliferation with subsequent contraction of the tissues forming the framework of the liver is the principal cause of obstruction. It may be supplemented by thrombosis of the portal vein and by defects in the general circulation. In cirrhosis of the liver about 50 per cent. of the cases progress to a fatal issue without ascites, and its absence is explained in these cases by the enlargement of the normal anastomotic vessels connecting the systemic and portal veins and by the development of new anastomoses in adhesions formed between the viscera drained by the portal vein and the abdominal walls. The value of drainage as an adjunct to operations is beyond dispute. Epiplopexy is contraindicated when any of the important viscera of the body are defective. It should in all cases be preceded by one or more tappings. Details of the operation vary, but omental fixation is the most important step. The pathologic changes in the liver are permanent and, therefore, incurable, but the ascitic phenomenon is capable of being arrested and the life of the patient prolonged by the operation.

Duodenal Ulcer.

DR. WILLIAM J. MAYO, Rochester, Minn., in his paper, entitled "Surgical Treatment of Ulcer of the Duodenum," declared that in all chronic ulcers of the stomach and duodenum 40 per cent. are situated in the duodenum alone or in connection with the stomach, and that 50 per cent. of all chronic indurated ulcers are also so situated. He then discussed ulcer and its surgical treatment. He thought that gastrojejunostomy has the largest field of usefulness, and excision may sometimes be resorted to.

Acute Septic Peritonitis.

MR. CHARLES JOHN BOND, F.R.C.S., Leicester, introduced the discussion on "Acute Septic Peritonitis." He spoke of the great importance of the diaphragmatic portion of the peritoneum and the peculiar sensitiveness of that portion which covers the small intestines. He described the way in which the peritoneum reacts to infection and the protection of the endothelial layer by the formation of a fibrinous deposit. Chemical peritonitis is not seen clinically. Peritonitis accompanying the intraperitoneal extravasation of blood is generally due to the *Staphylococcus albus*. Gonococcal peritonitis is not highly virulent. In ruptured gastric and duodenal ulcer the infection is not highly virulent, but the necessity for immediate operation is most urgent. The infection may frequently be arrested by irrigation, with or without drainage. Septic peritonitis is due to infection from the alimentary canal below the duodenum. The frequent and early migration into the peritoneum of the *Staphylococcus albus* in septic peritonitis, acts beneficially by stimulating the phagocytosis, and has an important bearing on treatment and the question of irrigation.

Peritonitis due to streptococcus infection is highly virulent and generally fatal. Pneumococcal peritonitis is frequent in female children and is present in primary and secondary varieties. The naked-eye observations, the character of the exudate and the appearance of the inflamed membrane are especially important in this variety of the disease. He next discussed the treatment by drugs, morphin and purgatives, by serum and spoke of the urgent need of a polyvalent anti-bacillus coli serum. In considering the surgical treatment, he dwelt especially on the importance of respecting the diaphragmatic area, and the risk of removing phagocytes by indiscriminate irrigation, and stated that the prime object is to attack the primary focus of invasion and arrest further infection.

The next point is the treatment of peritoneal cavity. In cases of moderate severity he considers the safest course to be the treatment of the primary focus by dry sponging or local irrigation and drainage, combined with the least amount

of interference with the general cavity, unless collections of fluid exudate in the pelvis or loins require drainage. Highly virulent streptococcal infection may require free irrigation with even partial evisceration. The cases of slight virulence are treated best by free irrigation, either with or without subsequent drainage.

He concludes that irrigation is beneficial where the peritoneum contains foreign material, capable of removal by flushing, but that it is harmful in cases of fibrinous sticky exudate and when used to wash away a turbid exudate containing active phagocytes or when instrumental in spreading infection. Free drainage or tamponade is essential in the treatment of local abscesses, necrosis of the bowel, or when treatment of the primary focus of the invasion must be necessarily incomplete. It is generally harmful in the upper peritoneal area unless this is primarily infected. In the area of the small intestine it is of very little use. It is most frequently used in the lateral areas and in the pelvic basin. The efficiency of peritoneal drainage depends on the integrity of the endothelium in the area drained.

(*To be continued.*)

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fifty-sixth Annual Meeting, held in Bedford Springs, Sept. 10-13, 1906.

(*Continued from page 1049.*)

Treatment of Ulcer of the Cornea.

DR. EDWARD STIEREN, Pittsburg, does not believe that cauterization or stimulation of the ulcer should be thought of in the early stages of a corneal ulcer; and it is a question in his mind whether the employment of eserin or pilocarpin ever preserves an iris from prolapsing into a marginal ulcer, when it perforates and is accompanied with a sudden gush of the aqueous humor. He is also confident that too frequent cleansing of the eye has an untoward effect on the reconstructive process of this delicate structure. His plan of treatment is as follows:

First, flushing liberally with saturated boric acid solution; second, filling the sac and keeping the lids covered with bichlorid of mercury ointment, in order to keep the sac as aseptic as possible; third, aiding the cornea in its recuperative process by atrophinizing the eyes, covering them with a cotton dressing, and keeping the patient in a moderately darkened room. Dionin dusted under the lower lid after the eye has been cleansed and before the bichlorid ointment has been used, causes the ulcer to heal more rapidly and renders the patient more comfortable. Indolent ulcers and those showing a tendency to spread are best treated with light applications of tincture of iodin. After using this agent the healed ulcer will show a scar less dense than when stronger chemical agents have been used. Dr. Stieren uses the cautery only in cases of corneal abscess. The liberation of pus caused by the cauterization relieves the excruciating pain usually present. Cases of ulceration of the cornea occurring in gonorrheal ophthalmia or in ophthalmia neonatorum demand especial attention. In such cases it is impossible to obtain even a moderate degree of cleanliness or asepsis of the conjunctival sac. The newer silver salts, although they may not be efficient bactericidal agents, are of value as protective and cleansing agents in gonorrheal ophthalmia. The opacities after their use are less dense than when strong cauterizing agents have been used.

Endogenous Infections.

DR. HOWARD F. HANSELL, Philadelphia, said that there are two groups of endogenous infections: intestinal intoxication and metabolic autointoxication. Endogenous ocular diseases are those which are caused by a poison created within the body in an organ other than the eye, and conveyed to the eye from the affected organ by means of the circulatory or lymphatic systems. They are distinct and separate diseases from those which involve the eye caused by germs or poisons acquired from sources without the body, or ectogenous diseases. A third class might be made of those which are partly ectogenous and possibly endogenous in causation. A distinction should also be made between autointoxication and metastasis. The former is a lesion induced in a distant organ by an agent created at the original site of the disease; the latter, a conveyance to a distant organ of one or more of the elements that made up the original disease. Endogenous infection of the eye usually starts in the uveal coat, either as a minute thrombosis or as a microscopic collection of bacteria. Next in frequency to the choroid is probably the retina, and finally the vitreous and the aqueous.

New Procedure for Treating a Prolapse of Iris.

DR. EDWARD B. HECKEL, Pittsburg, said that in a case with simple prolapse of the iris he renders the eye aseptic and instills eserin three times, at intervals of ten minutes. He then waits ten minutes, and then snips off the iris close to the cornea. He uses a horn spatula, shaved down to a millimeter in width, or thereabouts, depending on the size of the corneal wound. He introduces the spatula into the wound, with its long axis parallel to the long axis of the wound; then gives it a slight twist, being careful to allow the iris to withdraw itself gradually from the corneal wound. The lips of the wound will then come close together. A light pressure bandage is then applied. The action of eserin is continued, and the pupil is drawn back to its original position. A good result is secured. Sometimes Dr. Heckel has undertaken the procedure without the use of eserin. The results were sometimes good and sometimes not.

What Is the Safest Operation for Cataract?

DR. WENDELL REBER, Philadelphia, considers that operation the best which insures the greatest safety to the patient. He is convinced that preliminary iridectomy offers the greatest chance of success. So many patients and their family physicians oppose this method, however, that he has made an investigation of the views of the majority of the American operators. He sent circular letters to 160 of these, asking in what conditions they perform preliminary iridectomy, and whether they would do so in a patient who had already lost the sight of one eye. Dr. Reber thinks that one should be governed by the cause of the condition. Those who oppose preliminary iridectomy do so because the cosmetic effect is poorer; it produces more traumatism; the patient's vision is poorer afterward; it requires a longer time to perform; there is more dazzling afterward; the vitreous is not so well retained, and it is not justifiable to subject a patient twice to the risk of infection. The argument for extraction with iridectomy is that it does not require so large an incision; capsuliotomy is more readily done; delivery of the lens is easier; fewer secondary operations are necessary; iris prolapse is rare; any glaucomic tendency during the healing may be forestalled; there is less confinement to bed, and less hemorrhage. The argument against two operations are that there is increased risk in opening the eye twice; one must cut through the scar tissue of the first operation; patients do not care to go through a second operation; the chances of success are no better with a preliminary operation entailing needless mutilation, and it wastes the patient's time. The author then gives a list of 14 arguments for preliminary iridectomy. Dr. Reber thinks that a procedure that facilitates not only the diagnosis of cataract, but still more the most important parts of the operation on it, seems to merit the preference to other methods. Extraction of cataract is never simpler, easier or more durable than when performed on an eye in which the iridectomy has been previously made.

Relation of Thyroid and Parathyroid Glands.

DR. ALLEN J. SMITH, Philadelphia, formulated the following statements: 1. The parathyroids and thyroid glands are structurally distinct and are not in any sense interconvertible. 2. There is probably some relation in their function, and loss of one seems to stimulate the other into special activity (at least, into an apparent hypertrophy). 3. The parathyroids are essential to life, and when lost, are soon followed by death, with previous intense symptoms of a neurotic autointoxication, which can not be averted by the thyroid itself, even if practically intact. 4. The loss of the thyroid is followed by chronic trophic and metabolic disturbances, which are not necessarily fatal, and which in general follow the type of cretinism, myxedema and chronic cachexia strumipriva in

man. While the function of the parathyroid strongly suggests its action in an antitoxic manner, there is reason to believe that in the case of the thyroid a metabolic physiologic secretion is produced, although it is possible that in a limited sense here, too, an antitoxic action is associated. 5. It seems probable that the active product of the thyroid is one of the iodin-organic compounds that have been isolated from it, probably the thyroglobin of Oswald. 6. There is suggestive evidence that, in addition to the indefinite relation believed to exist functionally between the thyroid and parathyroids, there is also a close relation held to the thyroid by the hypophysis cerebri, which may have some degree of compensatory ability. 7. In addition to the foregoing, the thyroid also is concerned in the functions of growth; is involved especially in nitrogenous metabolism, and has some indefinite but real influence on the development and efficiency of the generative apparatus.

Etiology of Diseases of Thyroid Gland.

DR. THEO. J. ELTERICH, Allegheny, classified diseases of the thyroid under the captions of congestion, inflammation (thyroiditis), neoplasms, simple hypertrophy (goiter), exophthalmic goiter, and cretinism and myxedema. In cretinism the administration of thyroid extract results in a return to growth and development approaching the normal. The therapeutic use of thyroid preparations has not been limited to diseases associated with disturbances of the thyroid gland, but has been extended to quite a large number of conditions that have no association with thyroidal perversion. Indications against the use of thyroid preparations are weakness of the cardiac action, albuminuria or glycosuria, tuberculous disease or a suspicion of grave renal or hepatic disease.

Symptomatology, Diagnosis and Medical Treatment of Exophthalmic Goiter.

DR. ALFRED STENGEL, Philadelphia, said that diseases very different from each other are probably now all classed together as exophthalmic goiter, the only distinction now made being between exophthalmic goiter and pseudo-exophthalmic goiter. The latter is sometimes a case in which the system has not the proper resisting power to the thyroid poisoning, and often results from fright at the menstrual period. It is transitory in character, but has some of the symptoms of exophthalmic goiter. In different pathologic conditions there may be hyperthyroidism. The symptoms may be more or less pronounced, nervous symptoms, sometimes very severe, being frequently present. There are also circulatory symptoms, including palpitation, murmurs and sudden flushes of the skin; the thyroid symptom of enlargement of the gland; and the ocular symptoms, including protrusion of the eyes, retraction of the upper lid, a tendency to wink at long intervals, and the staring forward of the eyes. Sometimes there are gastrointestinal symptoms, such as nausea and vomiting, pain in the abdomen and intense emaciation. Exophthalmic goiter is more permanent. The enlargement of the gland is less fluctuating, and in cases that are not exophthalmic, some other symptom is usually more prominent than is the thyroidal condition.

It is impossible to say, in any given case, whether the remedies prescribed or the hygienic regulations attending the giving of the remedies has accomplished the cure. On the other hand, there are some facts leading one to expect useful results from certain kinds of treatment. Electricity and other agents reduce the vascularity of the gland and limit the secretion. Sedatives are used for the nervous manifestations, but they do not have much effect. Cold applications over the thyroid are used from time to time.

Specific treatment is aimed at the hypersecretion of the thyroid gland. The milk of thyroidectomized goats has been used in the treatment, with rather encouraging results, also a substance obtained from this milk.

The *x*-ray has also ben tried with satisfactory results, the gland becoming sclerotic and atrophied. A certain proportion of the cases that might be called exophthalmic goiter will, however, recover in any case; a certain number of the other cases can be reached by the older methods of treatment designed to reduce the circulation in the gland and the glandular activity; but a large proportion of cases can not be reached in such a way. One should then choose between electricity or the *x*-ray and some of the new forms of antithyroidin or the cytolytic serum. If these fail the aid of a surgeon should be invoked.

Relation Between the Thyroid and the Eyes.

DR. JOHN E. WEEKS, New York, drew attention to the fact that diseases of the thyroid and parathyroid are, as yet, inseparable and that in considering the symptoms present in the eye due to thyroid disease, disease of the parathyroid must be induced. He considered the relation of the thyroid to the eye under the following headings:

(1) Conditions of the eye due to pressure of thyroid enlargements; (2) due to local metastasis of malignant thyroid tumors (very rare); (3) due to or associated with absence of thyroid gland; (4) due to compensatory enlargement of the hypophysis cerebri; (5) aggravated by or otherwise associated with goiter—Graves' disease, etc.; (6) due to some form of hyperthyresis.

Oration in Laryngology.

DR. IRA J. DUNN, Erie, delivered this oration, the first delivered before the society in seven years. He reported the progress made in laryngology and in rhinology during this period.

The Value of Skiagraphy in the Surgery of the Nose.

DRS. W. G. B. HARLAND and H. K. PANCOAST, Philadelphia, believe that *x*-ray pictures are of considerable value in giving a definite idea of the shape, size and location of the accessory sinuses, and in indicating the presence or absence of serious pathologic changes. While more accurate than transillumination, skiagraphy is also influenced by thickness of bone and similar factors, and the pictures should be studied in connection with other means of diagnosis. The secret of success in getting a good picture lies in the use of a hard tube and a diaphragm, with plenty of current and a short exposure. For lateral views the plate is held on the diseased side, the tube being distant about eighteen inches. Exposure should last from twenty-eight to thirty-three seconds, and thirty-two to forty-eight amperes of current should be used. For antero-posterior views the plate is held in front of and close to the face. Clothing is removed from the neck and the tube is held well down. The distance of the tube should be sixteen inches; exposure, ten to twenty seconds; and current, sixty amperes of the primary.

DISCUSSION.

DR. WEIDLER asked whether, when the existence of pus is suspected in these sinuses, it is always found there at operation; or whether, just as in transillumination, the presence of pus may be suspected, and none be found on opening the cells. He also inquired whether Dr. Harland had worked out a table of percentage failures in such cases.

Dr. Pyfer said that the skiagraph is very valuable and suggestive, but that the darkening of the cells may mean only a difference in the technic. The plate may be in error, or the conditions may have changed. No one should operate or recommend an operation based on the skiagraphic findings.

DR. JACKSON said that any additional aid in making the diagnosis in these sinus-affections should be welcomed. He referred to the work in skiagraphy done by Dr. Caldwell of New York. The results were beautiful, the difference between the diseased side and the healthy side being very marked. To obtain such results one must not only be skilled in this work, but must also be thoroughly acquainted with the anatomy and pathology of the parts.

DR. RISLEY said that skiagraphy probably would have proved useful in a number of his own cases, in which there was sinus-disease associated with protrusion of the eyeball. In two cases there was no apparent reason for suspecting frontal-sinus disease. The eyeball was pushed very far forward, there was violent pain, optic neuritis was present, and the vision was down to one-fifth. In one of these cases, operation disclosed an enormous pus-pocket back of the eyeball, the ethmoidal sinus practically being gone. Dr. Risley did not suspect the existence of such disease; it was only the

condition of the middle turbinated, which he was about to amputate, that led him to discover the trouble with the ethmoidal sinus.

Intranasal Conditions Bearing on the Etiology of Ear Diseases.

DR. G. HUDSON MAKUEN, Philadelphia, classified the intranasal conditions giving rise to ear complications as follows: (1) Those causing disturbances of nasal respiration; (2) those attended by suppurative intranasal and sinus inflammation, and (3) any condition which by pressure or otherwise may give rise to reflex disturbances. The first class includes hypertrophic and atrophic rhinitis, intranasal growths, septal deflections and spurs, and naso-pharyngeal hypertrophies and tumors; and the damage to the ear is chiefly mechanical in its origin. The second class includes all catarrhal conditions of the nasal and accessory cavities; and the damage to the ear is usually by continuity of structure. The third class includes those conditions which give rise to irritation of the terminal nerves in the nasal and accessory cavities, and set up ear complications by so-called reflex action.

(To be continued.)

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns.]

Typhoid Fever.

In an abstract in the *Pract. Med.* series Le Fevre states that the ideal diet for typhoid patients should be: 1, Liquid; 2, easily digested; 3, easily absorbed; 4, without solid residue; 5, not easily putrefiable; 6, should contain the requisite ingredients in normal proportions; 7, should be palatable. He states that milk alone does not fulfill these conditions or does so rather imperfectly. He recommends not more than two pints of milk daily, but adds carbohydrates, egg albumin, gelatin, especially in soups. He mentions the fact that gelatin obtained from soup stock is not only a nutriment, but is also a preventer of hemorrhages. This preparation, according to Harbin, serves three purposes: 1. It adds to the relish of various liquids. 2. It lessens nitrogenous waste from the system. 3. It prevents hemorrhage. He recommends a teaspoonful three times a day. Billings states that the effects of gelatin as a nutriment and as a hemostatic may be questioned. It is probable that gelatin which does not contain calcium chlorid will not increase the coagulation of the blood. It has not high nutritive value. In addition to other food preparations as a seasoning substance it may serve a good purpose. McCormick, in the same publication, gives the following outline of treatment of typhoid fever patients: The patient should first be given a bath for cleanliness, and an initial dose of calomel to move the bowels. Guaiacol is then recommended in emulsion or in capsules, in two-minim doses (.12) every two hours. This may be combined as follows:

℞. Guaiacol 3i 4
Eucalyptol 3ii 8

M. Ft. capsules No. xxx. Sig.: One capsule every two hours.

If this capsule is not well borne, he recommends that guaiacol carbonate be substituted, given in three-grain doses every two hours.

The bowels should be kept thoroughly open at first with calomel, followed by magnesium sulphate, sodium sulphate or other laxatives similar to the following:

℞. Podophyllin ..... gr. 1/8 .008
Massæ hydrargyri
Thymol, āā ..... gr. i .06

M. Ft. capsula No. i. Sig.: One such capsule every three hours until bowels move.

The colon should be well washed out once daily with a normal saline solution; if the temperature is 102.5 F. or higher this enema should be given cold; if below that degree it should be given lukewarm. To relieve tympanites he recommends turpentine emulsion in five-minim doses (.30).

Highsmith advises the following to relieve tympanites.

℞. Hydrarg. chlorid mitis
Pulv. ipecacuanhæ
Pulv. opii
Pilocarpinæ muriatis, āā ..... gr. i .06

M. Ft. chartulæ No. xx. Sig.: Take one every hour.

DIARRHEA.

O'Connor states that diarrhea is due to the patient being unable to digest milk, and beef tea also increases the tendency to diarrhea. When diarrhea is present barley water should be added or lime water, and, if necessary, peptonized milk with lime water should be given; beef tea should be stopped and mutton broth added in its stead. If the stools are offensive, small doses of calomel may be added.

CONSTIPATION.

This may be correctel by increasing the broths and reducing the milk.

HEMORRHAGE.

The stools should be constantly examined for evidences of blood. Sometimes sloughs may be found antecedent to the hemorrhages, when turpentine may be given and the diet regulated. When hemorrhage is present he recommends administration of opium and turpentine, a reduction of the stimulants as much as possible and the administration of calcium chlorid.

Yeo states that in cases of hemorrhage the intestinal movements must be arrested and in some cases this inactivity must be prolonged for 14 days in order to avoid the danger of a recurrence, and then to produce a movement by an enema of olive oil. On the occurrence of hemorrhage he recommends the following enema:

℞. Pulv. opii et ipecac. ..... gr. v .30
Acidi tannici ..... gr. x .65
Mucil. acaciæ ..... ʒi 30

M. Sig.: This amount to be combined with one or two ounces of warm water, arrow-root water or a thin starch solution and introduced into the bowel through a long rectal tube (8 to 10 inches long). In case of children the amount of Dover's powder must be proportionately reduced.

By the mouth the following combination is recommended:

℞. Acidi gallici ..... gr. lx 4
Alcoholis ..... fʒi 30
Solve et adde
Acidi sulphurici arom. ..... fʒi 4
Glycerini ..... ʒiii 12
Liq. opii sedatavi (B. P.) ..... m. xv 1
Aquæ cinnamomi q. s. ad ..... fʒvi 180

M. Sig.: Two tablespoonfuls every hour for six doses and then every three hours.

HEADACHE.

For the relief of the headache which so constantly accompanies typhoid fever, O'Connor recommends antipyrin in moderate size doses or sodium salicylate with mustard applied locally to the nape of the neck. He speaks of severe headache as indicating a liability to hemorrhage.

McDowell, in the *Dublin Jour. of Med. Sciences*, recommends in the earlier stages of the disease that a mixture containing dilute hydrochloric acid be given, and as the disease progresses he advises the following combination:

℞. Quin. sulphatis ..... ʒss 2
Acidi citrici ..... fʒiiss 10
Aquæ q. s. ad ..... fʒiv 120

And:

℞. Ammon. carb. ..... gr. lxxx 5
Tinct. senegæ ..... fʒiiss 10
Sodii bicarb. ..... ʒiiss 10
Tinct. digitalis ..... gtt. lxxx 5
Aquæ q. s. ad ..... fʒvi 180

M. Sig.: Two teaspoonfuls combined with one-half teaspoonful of the alkaline mixture and half a teaspoonful of water in effervescence every three or four hours.

If the patient's heart is weak and a cardiac tonic is indicated, the following combination is recommended:

℞. Tinct. strophanthi f3i 4
Liq. strychniæ (1 per cent.) f3ss 2
Aquæ dest. q. s. ad ..... f℥iii 90

M. Sig.: One teaspoonful as necessary.

To relieve the severe headache and the pains throughout the body the following combination is recommended by McDowell as a very efficient one:

℞. Sodii salicylatis
Kalii nitratis, āā ..... gr. x 65
Tinct. gelsemii ..... m. v 30
Aquæ q. s. ad ..... f℥ss 15

M. Sig.: To be taken at one dose.

To check hemorrhage the following combination is recommended:

℞. Tinct. camph. co f3ss 2
Acidi sulph. arom ..... m. x-xx 65-1.20
Spts. chloroformi ..... m. x 65
Syr. zingiberis f3i 4
Decoct. hematoxyli q. s. ad ..... f℥ss 15

M. Sig.: This amount to be taken at one dose and repeated after every bowel movement, diminishing the amount as soon as the hemorrhage seems to be under control.

To relieve the persistent vomiting he recommends a mustard leaf to the epigastrium and the following combination in half-ounce doses every four hours:

℞. Bismuthi subnitratis ..... gr. viiss 50
Potassii nitratis ..... gr. ii 12
Liq. morph. hydrochlor. (1 p. c.) ... m. viiss 30
Acidi hydrocyan dil ..... m. iiss 15
Pulv. tragacanthæ co ..... gr. viii 50
Aquæ q. s. ad ..... f℥ 15

M. Sig.: To be taken at one dose.

The first dose should be preceded by half a teaspoonful of dilute hydrochloric acid. In case of failure he advises nutritive enemata, administering the mixture at intervals to test the irritability of the stomach.

Diarrhea is checked, according to McDowell, by stopping all nitrogenous foods, peptonizing all milk and administering one of the following combinations:

℞. Tinct. camph. co f3ss 2
Acidi sulph. arom ..... m. xv 1
Spts. chloroformi ..... m. x 65
Aquæ q. s. ad ..... f℥ss 15

M. Sig.: To be taken at one dose and repeated as necessary. Or:

℞. Tinct. camph. co f3ss 2
Sodii bicarb ..... gr. v 30
Pulv. cretæ co ..... gr. xx 1.20
Tinct. opii ..... m. v 30
Spts. chloroformi ..... m. x 65
Sodii salicylatis
Pulv. tragacanthæ co., āā ..... gr. x 65
Aquæ q. s. ad ..... f℥i 30

M. Sig.: At one dose.

Moore regards the salicylate of quinin as superior to salol or any other intestinal antiseptic.

Turpentine is regarded by some authorities as the best general remedy in typhoid fever. It may be given in capsules in from 5 to 10-minim doses (.30-.65) or combined as follows:

℞. Spts. terebinthinæ
Spts. etheris nitrosi
Spts. chloroformi, āā f3i 4
Syrupi amygdalæ q. s. ad ..... f℥iii 90

M. Sig.: Shake the bottle well and take one tablespoonful at a dose. Or:

℞. Spts. terebinthinæ
Tinct. lavendulæ co., āā f3iss 6
Sacchari 3iss 6
Pulv. acaciæ 3ii 8
Aquæ q. s. ad ..... f℥iii 90

M. Sig.: Two teaspoonfuls every three or four hours.

NERVOUS SYMPTOMS.

Nervous symptoms are best treated by hydrotherapy, such as the ice pack or ice cap. The following combination may have to be employed to allay the nervous manifestations:

℞. Strontii bromidi
Sodii bromidi, āā 3vi 24
Aquæ menth. pip. q. s. ad ..... f℥iii 90

M. Sig.: One tablespoonful every three hours in water. Or:

℞. Ext. opii ..... gr. iii 20
Asafetidæ 3ss 2
Ext. hyoscyami ..... gr. iii 20
Olei theobrom. q. s. .....

M. Ft. suppos. No. vi. Sig.: One suppository every four hours.

Medicolegal

Rights of State Boards to Revoke Licenses.

The Supreme Court of Indiana holds, in Spurgeon and others vs. Rhodes, that it was error to grant a temporary injunction, on the application of the latter-named party, restraining the members of the State Board of Medical Registration and Examination from proceeding to hear and determine charges of "gross immorality" pending against him before said board and from revoking his license to practice medicine. It says, among other things, that the allegation in the complaint to the effect that a certain-named woman was employed to procure evidence in regard to his character was not denied, but this alone would not authorize the granting of a temporary injunction. The gist of the complaint was that the defendants had prejudged his case and had intended to revoke his license without any evidence and without giving him a hearing. The affidavits of five members of the board and their attorneys denied the charge, and said in effect that they intended to and would give him a fair and impartial hearing, and would determine the charges according to the evidence. This was all that he was entitled to demand. The fact that the woman mentioned was not in the state and could not be compelled to attend the hearing of the charges, or that the board would try the charges without her presence or testimony, furnished no ground for enjoining the board from hearing and determining the truth of the charges.

It was insisted that the temporary injunction was properly granted for the reason that section 7322 of Burns' Annotated Statutes of Indiana of 1901, under which the charges in question were presented to the board, so far as it attempted to confer on the board the power to try complainant and determine whether or not he was guilty or not of the gross immorality charged, and to revoke or refuse to revoke his license therefore, was wholly unconstitutional and void, in that it attempted to confer on the board such judicial power; that it was in violation of the fifth amendment of the Constitution of the United States, which provides that "no person shall be held to answer for a capital or other infamous crime unless on a presentment or indictment by a grand jury," and of the sixth amendment, which provides that "in all criminal prosecutions the accused shall enjoy the right . . . to have compulsory process for obtaining witnesses in his favor"; and that it violated the provision of said Constitution that "the trial of all crimes except in cases of impeachment shall be by jury." But the court says that these provisions apply only to proceedings and prosecutions in the courts of the United States and laws enacted by Congress; not to laws enacted by the legislatures of the states.

Statutes prescribing the qualifications of practitioners of medicine and surgery, and otherwise regulating the practice of those professions have been uniformly upheld by the courts as a valid exercise of the police power of the states, infringing no provisions of either federal or state constitutions. Statutes containing a provision like the one in question here, authorizing the board to revoke a license when the holder has been guilty of a felony or of gross immorality, have been held not to violate any provision of the federal or state constitutions, and it has been held that the granting or refusing to grant a license to practice medicine, or the revocation thereof by the board, is not the exercise of judicial power.

Physician Can Not Recover for Street Railway's Damage.

The Supreme Judicial Court of Maine says, in the case of Parsons vs. the Waterville & Oakland Street Railway, an action brought by a physician, that the fact that the plaintiff was hindered, delayed, and inconvenienced, and people desiring to consult him professionally were kept away, because of having to cross the defendant's track, would not give him a right of action against the defendant for a lawful use of the public way. The use of a street by a street railroad is a public servitude imposing no additional burden on the abutter.

Exhibiting Person With Explanations by Physician.

The Kansas City Court of Appeals says, in the personal injury case of Houston vs. Chicago, Rock Island & Pacific Railway Co., where the plaintiff was thrown down, striking his back on an iron coupling, that he was permitted, during the trial, to remove his clothing from the part of his body said to be affected by the injury while a physician stated where the nerve or nerves were located and the course of their location. The court does not discover any error in so doing, or any harm which could result to the defendant therefrom.

Son Not Necessarily Employed—Power of Local Surgeon.

The Court of Civil Appeals of Texas says, in Galveston, Harrisburg and San Antonio Railway Co. vs. Allen, brought by two physicians, father and son, to recover for medical services, that, while it may be that "necessity knows no law," it is certain that the law knows no necessity for a young physician being regarded as employed in a case of surgery because of the employment of his father. It also says that it can no more be said that it is within the scope of the apparent authority of a local surgeon of a railway to employ another surgeon to do his duty than it can be said that it is in the apparent scope of a station agent's authority to employ another man as a station agent to perform the duties intrusted him.

Contagious Disease Hospital Not Deemed a Nuisance.

The Court of Chancery of New Jersey says, in the case of State, on the relation of the Board of Health of Hamilton Township, vs. the Inhabitants of the City of Trenton, that a building used as a hospital for the treatment of diseases contagious and infectious in their nature is not per se a nuisance, and the erection and use of such a building will not be restrained simply because there is an apprehension that it may result in being a nuisance; but the court must be satisfied that there is a well-grounded apprehension.

Waiver of Privilege Under Statute—Cross-Examination.

The Supreme Court of Idaho says, in the case of Trull vs. the Modern Woodmen of America, that section 5958 of the Revised Statutes of that state of 1887 contains the following provision: "There are particular relations in which it is the policy of the law to encourage confidence and to preserve it inviolate; therefore, a person can not be examined as a witness in the following cases: . . . 4. A physician or surgeon can not, without the consent of his patient, be examined in a civil action as to any information acquired in attending the patient which was necessary to enable him to prescribe or act for the patient." This provision of the Idaho statute is to be found in the statutes of many of the states, and especially in California, New York, and Missouri. It has been uniformly held that such a statutory provision disqualifies a physician from testifying concerning any facts learned by him or disclosures made to him in the course of his professional treatment of or attendance on a patient. It has also been held that the privilege accorded the patient by such a statute is a personal privilege and can not be waived for him by any other person, and that the death of the patient makes a waiver impossible, and that the physician can never thereafter be permitted to testify concerning any matter touching his professional employment during the life of the patient. On this point, however, there is great diversity of opinion.

More particularly, the court holds in this case that, where, in an application for life insurance the applicant stipulates and agrees that he waives all provisions of law preventing a physician from testifying as to any information acquired by him while attending his patient or rendering him incompetent as a witness as provided in section 5958 above quoted, such waiver is valid and entitles the beneficiary named in the policy, as well as the insurer, in an action on a policy issued on such application, to call and examine the physician who attended the insured during his last sickness, and have him answer questions which, but for such waiver would be regarded as privileged communications that the witness could not disclose. Since the statute authorizes the patient to waive the privilege of secrecy imposed on his physician, and does not fix any specific time at which such waiver can or must be made, no reason is discovered why the waiver may not equally as well be made by contract and in advance of the relation of physician and patient arising as at the time of the trial. As to whether or not the privilege of secrecy granted by statute is a personal privilege attaching only to the person of the patient or can be waived by his heir or legal representative is a question left, so far as this court is concerned, undecided.

The court finds no error in a physician being permitted to be asked on cross-examination the question: "If a man died of the disease supposed to be smallpox, and the man who nursed him all that time had never been vaccinated, and did not take the smallpox at all from the patient, would you think it smallpox?" The rule, it says, is liberal in allowing a broad range of inquiry on cross-examination, and this rule is especially and particularly applicable when it comes to the cross-examination of that class of witnesses commonly called "experts."

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

September 22.

1 *Obstruction of the Common Bile Duct. J. F. Erdmann, New York.
2 *Lupulin in the Treatment of Gastrointestinal Diseases. H. Stern, New York.
3 Some of the Factors that Predispose to Phthisis. L. P. Barbour, Boulder, Colo.
4 Tuberculous Peritonitis. J. B. Boucher, Hartford, Conn.
5 *An Urgent Plea for the Use of Larger Doses of Antitetanic Serum for Lockjaw. R. Engelmann, Chicago.
6 *Dipsomania. C. J. Douglas, Boston.

1. Obstruction of Common Bile Duct.—Erdmann says that when all medical aid has been given without result, or if the symptoms are so urgent as to demand immediate surgical interference, the condition narrows itself to a question of surgical technic and after treatment. In exposing the duct Erdmann makes the incision over the right rectus muscle, splitting the fibers in the middle and internal, or middle and external thirds, for a distance sufficiently long to explore the duct. If the stone is located or adhesions demand it, the incision is rapidly enlarged to give ample working room. After the stone is removed, a fish-tail rubber tube, with from one to three openings, and from 10 to 12 inches long, is passed into the duct in its proximal direction for its lower three-quarters of an inch, sufficiently to bury the apertures only. The tube is held in place by a suture of chromic catgut.

2. Lupulin in Gastrointestinal Diseases.—Stern has found lupulin of special value in the functional disturbances of the stomach, in sensory as well as motor and secretory neuroses, and in neurasthenia gastrica. Lupulin may also be employed with advantage in diseases of the stomach, with an anatomic basis. As in gastric diseases, so in relation to the intestines, lupulin is particularly useful in the treatment of neuroses and functional disorders. In intestinal diseases with an anatomic basis, lupulin is often a symptomatic and sometimes a curative remedy. Stern claims that the use of this drug for protracted periods is never followed by undesirable after effects, which are so common with many remedies employed for similar purposes. He thinks that it is probable that enteric fever, as well as dysentery, will be favorably influenced by it.

5. Use of Larger Doses of Antitetanic Serum.—Engelmann believes that the ineffectiveness of antitetanic serum in cases of tetanus is due to insufficient doses. In one case, the his-

tory of which she reports, she administered the serum by both intraspinal and subcutaneous injections to the amount of from 60 c.c. to 80 c.c. daily to begin with, the total amount given being 650 c.c. subdurally, and 45 c.c. directly into the wound. After five days of this treatment the man was comfortable, with flaccid muscles and less rigid jaw. Recovery took place in four weeks and at the end of six weeks the patient was back at work.

6. **Dipsomania.**—Douglas defines dipsomania as an abnormal demand of the nervous system, either constant or periodic, for the drug action of alcohol—a demand so strong that the patient takes the alcohol in spite of his earnest wish and effort to avoid it. Dipsomania partakes of the nature of both a neurosis and a psychosis, the predisposing cause being a nervous system that is peculiarly susceptible to the poisonous or intoxicating action of alcohol. Dipsomania is a curable disease and not a mere habit. The patient should be removed from home, with all its customary surroundings, and devote himself to the business of being cured. In the majority of cases Douglas administers some remedies hypodermically at stated hours. He usually prescribes alcoholic liquors during the first few days of treatment, gradually withdrawing them. Milk and raw eggs are probably the best nutriment. He finds that apomorphin is the most prompt and effective hypnotic.

Boston Medical and Surgical Journal.

September 20.

7 Two Cases of Lymphatic Leukemia. J. L. Whitney, Branford, Conn.
8 Trachoma. B. P. Croft, Greenfield, Mass.
9 *Winter Climate of Tucson, Arizona. I. W. Brewer, Fort Huachuca, Ariz.
10 *Removal of an Enormous Ovarian Tumor. W. A. Smith, Springfield, Mass.

9. **Winter Climate in Tucson.**—Brewer recommends residence in Tucson during the winter to consumptives. The town itself is all that can be desired for residence purposes, he states, both as to its surroundings and social advantages. The temperature from October to March is ideal. Only 6 per cent. of the days are cloudy, and rain falls on an average of only 19 days. There are occasional dust storms. Tucson is a desirable winter resort for persons in the early stages of tuberculosis, but not for advanced cases.

10. **Enormous Ovarian Tumor.**—The tumor removed by Smith weighed 192 pounds. The patient was 42 years of age and had been ill for two or three years. She had been under treatment by a quack for nearly two years, electricity being used in the treatment, but the tumor continued to increase in size. The cyst wall was adherent over the entire front of the abdomen, covering a space of about three square feet, extending to the diaphragm, and involving a portion of it. Beneath the liver was a mass the size of a child's head, consisting of several small cysts. The pedicle was about half an inch in diameter. The patient died 24 hours after the operation from general exhaustion and shock.

New York Medical Journal, New York.

September 22.

11 *Prostatectomy for Prostatic Hypertrophy. R. Guiteras, New York.
12 *Cholecystostomy, an Improved Technic. H. Crouse, El Paso, Texas.
13 *Small Frequent Meals in the Treatment of Certain Biliary Affections. C. Herrmann, New York.
14 Gunshot Wounds of the Spinal Cord. A Plea for Early Myelorrhaphy. (To be concluded.) I. S. Haynes, New York.
15 Surgical Anesthesia, as Produced by Narcotic Alkaloids, with Especial Reference to the Antiquity of the Method. W. W. Babcock, Philadelphia.
16 A Case Illustrating the Effect of Long Continued Pressure on the Interior of the Mastoid by a Fluid of Low Infectivity. J. D. Richards, New York.
17 Dangers That May Lurk in Ordinary Milk, and the Duty of the Physician to Educate the Public and the Authorities in the Necessity of a Pure Milk Supply. D. J. M. Miller, Philadelphia.
18 Danger of Weak Solutions of Carbolic Acid when Used in Surgical Dressings. A Plea for Restricting Their Sale. L. B. Meyer, New York.
19 Case of Angioneurotic Edema. H. Morgenbesser, New York.

11. **Prostatectomy.**—Guiteras reviews the improvements made in the operation of prostatectomy by American surgeons and devotes considerable space to discussing the relative merits of the perineal and suprapubic operations. He favors the latter, although he believes that certain prostates can be removed more easily and safely by the perineal route. He says that suprapubic prostatectomy holds the same relation to the perineal operation that abdominal hysterectomy does to the vaginal, in that it is a better surgical procedure; that the changing of the patient's position simplifies the different steps of the operation; and that in most cases suprapubic prostatectomy is preferable to the perineal on account of the ultimate operative results, the purposes for which the operation is performed.

12. **Cholcystostomy.**—As a substitute for Robson's methods, which he deems faulty, Crouse offers a surgical procedure for which he claims the following advantages: 1. It permits the delivery of the fundus of the gall bladder through the entire abdominal wall, unless the patient is inordinately fleshy. 2. Pericholecystitis frequently binds not alone the gall bladder into a constricted position, but drags on the S-curved cystic duct to the extent of at times inducing all the simulating symptoms of calculi and furthering their cystic development. The method above described removes such restrictions, straightens out the cystic duct, thus favoring more perfect drainage not alone of the cystic, but of common and hepatic ducts as well. 3. It liberates the gall bladder from the usual strain of respiratorily induced hepatic movements, fruitful sources of subsequent pains. 4. The gall bladder's new position does not lay the patient liable to hernial development between liver and gall bladder, owing to the usual anatomic restraint of mesocolon attachments of duodenal hepatic ligament and gastric position. 5. It permits surgical cleanliness, digital exploration and immediate drain of gall bladder. 6. A perfect approximation between gall bladder and parietal surfaces is permitted. 7. It permits all surgical steps to be made safely at one sitting, gives a thoroughness and completeness to the operation not experienced while following the Robson methods.

13. **Treatment of Biliary Affections.**—A member of his own family having had a biliary fistula during the last five years, Herrmann had an unusual opportunity of observing the effect which the ingestion of food had on the relative quantity of bile which flowed into the duodenum by way of the common bile duct, and the amount, which flowed into the cystic duct and out through the fistula. Several facts were noted. First, the amount of fistulous bile was greater during the night than during the day, in the proportion of about two to one. Second, when a meal was taken late at night there was very much less fistulous bile, the daily amount of bile secreted remaining approximately the same. These facts indicated that the ingestion of food had a decided effect on the amount of bile which passed into the duodenum. It was further noted that fruit and other substances which increased intestinal peristalsis, also diminished the amount of fistulous bile. Alcohol seemed to act unfavorably by increasing the amount which escaped. The regular habit of tea drinking gave a disagreeable odor to the bile. If the last meal is taken at 7 o'clock in the evening, at 11 o'clock it has usually passed entirely into the small intestine, and from that time until 7 o'clock the following morning the bile secreted is for the most part stored up in the gall bladder, or if there is a fistula, the greater part escapes through that opening. If a meal is taken at 11 or 12 o'clock, its digestion requires two or three hours; during this time bile flows into the duodenum, and so much less escapes through the fistula. During the day the intervals between meals are shorter, so that there is less bile stored in the gall bladder, and therefore less escapes through the fistula. By adding a small meal at night, Herrmann succeeded in reducing the amount of fistulous bile from 26 to 6 grams.

These results prompted him to employ a similar method in the treatment of catarhal jaundice. The result was a most gratifying one. The treatment consists in giving five or six small meals instead of the usual three daily, an extra one being introduced at 10 o'clock in the morning, at 4 o'clock in the afternoon, and at 11 o'clock at night. These small meals consist of milk, eggs, broth, crackers or bread. If the patient awakes during the night a glass of milk may be taken. The bowels are to be kept open by mild laxatives. A daily rectal

injection of cold water is sometimes very efficacious. Light exercises, especially such as bring into play the diaphragm and the abdominal muscles, are helpful.

Lancet-Clinic, Cincinnati, Ohio.

September 22.

20 Some Atypical Cases of Syphilis. A. J. Markley, Cincinnati.
21 How May Interstate Reciprocity Be Best Accomplished? E. S. M'Kee, Cincinnati.

St. Louis Medical Review.

September 15.

22 *The Circulation Viewed from the Periphery. J. Barr, Liverpool, England.
23 Origin and Heredity of Matter. (To be continued.) J. Wright, New York.

September 22.

24 *Technic of Operations on the Central Nervous System. V. Horsley, London.
25 *Occasion of the Dedication of the New Medical Auditorium. G. Homan, St. Louis.
26 *The St. Louis Medical Society in Its Earlier Years. L. Atwood, Fergusen, Mo.
27 *The Medical Profession of St. Louis To-Day. W. B. Outten, St. Louis.
28 *Future of the Medical Profession of St. Louis. W. G. Moore, St. Louis.
29 Origin and Heredity of Matter. (To be continued). J. Wright, New York.

22, 24.—See THE JOURNAL, Sept. 1, 1906, page 706.

25, 26, 27, 28.—See THE JOURNAL, Sept. 29, 1906, pages 1045 and 1046.

Pennsylvania Medical Journal, Athens.

September.

30 *Extrauterine Pregnancy. C. P. Noble, Philadelphia.
31 *Clinical Value of Blood Cultures. D. L. Edsall, Philadelphia.
32 *Technic and the Results in the Excision of Cancer of the Head and Neck. G. Crile, Cleveland, Ohio.
33 The Message of the Orient. J. E. Pilcher, Carlisle.
34 Nursing and Care of Our Insane. G. H. Moore, Schuylkill Haven.
35 Clinical Study of Our Insane. G. H. Moore, Schuylkill Haven.
36 *Observations on Conservatism in Connection with Gonorrheal Diseases of Uterine Appendages Based on Records of 195 Patients. K. I. Sanes, Pittsburg.
37 Practical Value of Some Old Remedies—Scopolamin Hydrobromid. J. V. Shoemaker, Philadelphia.

30.—See THE JOURNAL, Dec. 16, 1905, page 1906.

31.—See THE JOURNAL, Oct. 28, 1905, page 1350.

32.—See THE JOURNAL, Nov. 4, 1905, page 1438.

36. Conservatism in Gonorrheal Diseases of Uterine Appendages.—Sanes makes a plea for the conservative treatment of gonorrheal diseases of the uterine appendages, basing his remarks on 195 cases studied by him. Of this number 160 patients, or 82 per cent., were found to be below 30 years of age. Ninety-eight, or 50 per cent., had never been pregnant. Twenty-three, or 11 per cent., had aborted but had no children; fifty-seven, or 29 per cent., had only one child each, making a total of 90 per cent. of the patients each of whom naturally would be anxious to preserve her reproductive function. Sanes states that cases of gonorrheal salpingitis are often cured spontaneously by expectant treatment, some recovering spontaneously even after they develop into pus tubes. He cited a number of instances in which pregnancy took place, followed by the birth of a living child. For a pyosalpinx in its early stages, with the gonococci still active, if an operation is necessary, a vaginal salpingotomy and drainage is, to his mind, the best operative procedure. Abdominal conservative operation at this stage is dangerous. A sterile hydrosalpinx demands a salpingostomy, vaginal or abdominal. For a single sterile pyosalpinx it has been his practice to perform a salpingectomy, vaginal or abdominal. In double sterile pyosalpinx, the patient being young and anxious to preserve her sexual functions, a vaginal salpingostomy with drainage in the better tube is performed. A chronic pyosalpinx of long standing could hardly be expected ever to resume its function if saved, but even in such a tube, Sanes says, conservatism (vaginal salpingotomy) is often of value as a life-saving measure in patients whose general condition does not permit a radical operation. A secondary operation may be necessary later, but not always. With properly applied and repeated pelvic packing we can obliterate the pus sacs by allowing connective tissue formation, and while the tube then is useless it is also harmless, and the patient is saved from the more radical operation. Should complete salpingectomy be absolutely necessary, the ovaries, or part of them, should be preserved for the purpose of menstruation and possible ovarian secretion. To save part of the ovary involved in tubo-ovarian abscesses is neither safe nor advisable. In cases of double tubo-ovarian abscesses, therefore, no conservatism whatever is possible; but in the 141 patients operated on Sanes found only 7, or 5 per cent., of double tubo-ovarian abscesses, leaving 94 per cent. of patients in whom an attempt should be made to save at least a part of one ovary.

The number of conservative operations performed by Sanes for gonorrheal diseases of adnexa is 72. All the patients were discharged from the hospital as cured, there being no deaths. The postoperative histories could be followed up only in 34 cases. Of these 34 patients 9, or 26 per cent., had a secondary operation, 4 following vaginal drainage and 5 following unilateral salpingo-oöphorectomy. In the 5 secondary operations that followed unilateral salpingo-oöphorectomy no pus was found in any one of them. Two were found to be hydrosalpinx, 2 were normal, 1 was a pachysalpingitis. Four ovarian cysts found in connection with the first 4 tubes necessitated the 4 secondary salpingo-oöphorectomies. Thirty-three, or 97 per cent., retained their menstrual function. One patient, or 3 per cent., lost it in spite of the conservative treatment of the ovaries.

Of the 25 patients not reoperated on, 7 show adnexa palpable though not tender; and of these 7, 3 complain of occasional pain in the region of the palpable tubes. Three, or 9 per cent., conceived; one three years after a unilateral salpingo-oöphorectomy came to the office with pregnancy of three months' standing. One after a salpingo-oöphorectomy seven years ago miscarried twice, and one, the most remarkable of all, gave birth to a healthy child without any complications after a right salpingo-oöphorectomy, left salpingectomy, and partial excision of the left ovary.

Northwest Medicine, Seattle, Wash.

September.

38 Diagnosis of Insanity by the General Practitioner and the Consequent Duties which Must Necessarily Devolve on Him. C. E. Doherty, New Westminster, B. C.
39 Movable Artificial Eye. E. A. Hall, Victoria, B. C.
40 Ulceration of the Stomach. R. C. Boyle, Vancouver, B. C.
41 *Phosphatic Calculi Following Suprapubic Prostatectomy. R. E. Walker, New Westminster, B. C.
42 *One Hundred and Seventy-Seven Cases of Typhoid Fever Treated in Alaska. E. M. Rininger, Seattle, Wash.
43 Acute Contagious Diseases of Childhood: Duration of Danger of Contagion and Methods of Disinfection. H. G. Lazelle, Seattle, Wash.
44 Sources of Infection and Manner of Contagion of Acute Contagious Diseases of Childhood. W. N. Hunt, Bellingham, Wash.

41. Phosphatic Calculi Following Suprapubic Prostatectomy.—In the case reported by Walker the bladder wound closed entirely in about six weeks, and the patient's condition was all that could be desired for about three months, when he began to notice that when urinating the urine would cease to flow suddenly and there was pain with pyuria. On examination with a sound a calculus could be felt. The lithrotrite failing to crush the stone, the bladder was opened and two stones were removed. No cause for their formation was discovered.

42. Typhoid in Alaska.—During seven years of practice in Alaska Rininger treated 127 cases of typhoid. Of this number 13 occurred in females and 164 in males, the age ranging from 14 months to 66 years. The largest number of cases occurred in the third decade. Twelve patients had had the disease previously. Intestinal hemorrhage occurred in 10 cases. Fifteen patients developed venous thrombosis. In 12 cases the left leg was affected, in 2 cases the right, and in one case both legs were involved. Thrombosis of the left popliteal artery occurred in one case. This was followed by gangrene, necessitating amputation of the leg. Neuritis occurred in one case, affecting both feet. Severe nephritis occurred in one case, a man, aged 66 years. This patient died of uremic coma. Subacute osteomyelitis occurred in three cases, attacking the sixth rib at the costo-cartilaginous junction in each case. Orchitis and epididymitis developed in one case. Intestinal perforation occurred in three cases, two of which resulted fatally. There were four cases of relapse. No routine method of treatment was employed. There were only seven deaths in this series.

Archives of Otology, New Rochelle, N. Y.
August.

45 *Acute Purulent Otitis and Mastoiditis, Treated by Means of Artificially Induced Hyperemia, According to the Method of Bier. S. J. Kopetzky, New York.
46 Case of Brain Abscess Following Traumatism and Acute Mastoiditis. Case of Hysteria Simulating Brain Abscess After Operation for Secondary Mastoiditis. A. Wiener, New York.
47 *Treatment of Purulent Otitis by Congestive Hyperemia. W. Keppler, Bonn, Germany.
48 Simple and Radical Mastoid Operations Under Local Anesthesia. H. Neumann, Vienna.
49 Disturbances of Speech in Childhood. V. Hammerschlag, Vienna.
50 Objective Tinnitus. C. Friedmann.
51 Four Fatal Cases After Purulent Otitis. Hoelscher, Ulm, Germany.

45. **Bier's Hyperemic Treatment of Mastoiditis.**—Kopetzky summarizes his observations of the Bier method for the treatment of acute otitis media, either with or without mastoiditis, as follows: 1. If used early it will greatly increase the probabilities of curing the condition without resort to major operative measures. 2. In cases cured under its influence the re-establishment of ear function will occur quicker than under the usual line of treatment. 3. Its use by the inexperienced is absolutely dangerous. 4. Its employment should be limited to the young and the otherwise healthy. 5. Finally, when the indications are kept in mind and when properly and intelligently used, induced hyperemia will be found a measure destined, when its scope and limitations are better understood, to find a permanent place in otologic therapeutics.

47. **Congestive Hyperemia in Purulent Otitis.**—Kempler reports the excellent results obtained in the treatment of 10 cases by Bier's method and warmly recommends its employment.

Journal Missouri State Medical Association, St. Louis.
September.

52 Some Questions Concerning the Treatment of Uterine Fibromyomata. H. S. Crossen, St. Louis.
53 *Suprapubic Cystotomy as a Preliminary to, and as a Route for the Performance of a Considerable Number of Prostatectomies. W. T. Elam, St. Joseph.
54 Intestinal Autointoxication. J. B. Norman, California, Mo.
55 Etiology of Accessory Sinus Disease. F. C. Ewing, St. Louis.
56 Diagnosis of Inflammatory Diseases of the Accessory Sinuses of the Nose. G. Sluder, St. Louis.
57 Treatment of Diseases of the Accessory Sinuses. M. A. Goldstein, St. Louis.
58 Ocular Signs and Complications of Accessory Sinus Disease. J. Green, Jr., St. Louis.

53. **Suprapubic Cystotomy Preliminary to Prostatectomies.**—Elam does not claim that the suprapubic is the easier route or even the one of choice for the performance of the larger number of prostatectomies. In many cases, however, the immediate demand is for drainage and vesical rest, and Elam prefers the suprapubic route for this purpose. If conditions are favorable the prostatectomy can be performed at the same time, although he has found but few patients whose interests are not better safeguarded by deferring the prostatectomy until a later date, at which time it can be performed by the route which seems best adapted to the character of the growth. The plea in this paper is for conservatism in the effort to prolong life in the case of the advanced and extreme prostatic.

Interstate Medical Journal, St. Louis, Mo.
September.

59 *Relative Value of the Surgical Procedures Employed for the Relief of Paralyses Following Acute Anterior Poliomyelitis. N. Allison, St. Louis.
60 Case of Double Resection for the Correction of Protrusion of the Lower Jaw. V. P. Blair, St. Louis.
61 When Should We Operate in Appendicitis? R. Hill, St. Louis.
62 Urethrotomy for Ruptured Urethra. R. Harrison, London, England.
63 Angioma of the Upper Lid: Operation. J. W. Charles, St. Louis.

59. **Value of Surgical Procedures for Relief of Paralyses Following Acute Anterior Poliomyelitis.**—Allison says that in extreme forms of infantile paralysis, the wearing of apparatus and the use of crutches is necessary, that the upright position may be maintained. In extreme forms of infantile paralysis the wearing of heavy appliances may be materially lessened by the employment of operations designed to fix the joints. In cases in which there is good muscular power remaining in strong muscles, these muscles may be used to good advantage by transference of their tendons. Care should be taken that the insertion of these tendons is strong and permanent, and that the muscles pull to the best mechanical advantage. In certain cases tendon-transplantation may be supplemented to good advantage by arthrodesis. In slight forms of paralysis the grafting of nerves is a surgical procedure of recognized merit.

Journal of Nervous and Mental Disease, New York.
September.

64 *The Great Psychical Importance of Ear Disease. W. S. Bryant, New York.
65 Ear Affections and Mental Disturbances. E. Amberg, Detroit, Mich.
66 Question of Protopathic and Epicritic Sensibility and the Distribution of the Trigeminus Nerve (Third Branch). C. L. Dana, New York.

64. **Psychical Importance of Ear Disease.**—Bryant reports several cases of auditory hallucinations which are interesting because of their evident dependence on catarrhal conditions of the ears, as shown by the cessation of the hallucinations when the aural conditions were corrected. The evidence points to some connection between ear disease and hallucinations of hearing other than mere coincidence. Bryant thinks it is probable that hallucinations of hearing originate in subjective ear sensations in most cases, and that cure of the coincident ear disease cures or assists the convalescence from the psychoses in a notable number of cases. Some cases of insanity appear to be excited by ear disease and the convalescence of insane patients is delayed by the presence of ear disease. Unilateral hallucinations of hearing, he says, are unquestionably due to unilateral ear disease.

Ohio State Medical Journal, Columbus.
September 15.

67 Surgical Treatment of Intestinal Indigestion. E. Harlan, Cincinnati.
68 Skepticism in Medicine. S. P. Wise, Millersburg.
69 *Methods in the Diagnosis and Treatment of Prostatic Hypertrophy. J. H. Jacobson, Toledo.
70 Visual Results After Cataract Extraction. D. W. Green, Dayton.
71 The Anterior Capsule in the Extraction of Cataract. C. F. Clark, Columbus.
72 Some of the Minor Details Frequently Neglected in Cataract Extractions. R. D. Gibson, Youngstown.
73 Further Observations on the Pathology of General Paralysis of the Insane. J. D. O'Brien, Massillon, Ohio.
74 Typhoid Fever—Treatment and Prevention of Relapses. C. W. Hixson, Cambridge.

69. **Diagnosis of Prostatic Hypertrophy.**—Jacobson has found two methods of value in making a diagnosis of hypertrophy of the prostate. These are (1) cystostomy, and (2) bimanual examination with a suitable sound in the bladder and the finger in the rectum. He has modified his cystoscope by dividing the circumference of the circular hard rubber at the ocular end of the instrument into eight parts by eight lines, and one vertical line placed on the handle or electrical connection of the instrument, so that each of the eight lines of the ocular end are separately brought into alignment with the line on the handle, thus dividing the circumference equally. In order to be able to measure the urethral length as well as to determine the size of an intravesical enlargement, the shaft of the cystoscope, near the ocular end, is ruled in centimeters. He prefers the perineal route for operating.

The Canada Lancet, Toronto.
September.

75 *A New Operation for Extreme Cases of Septal Deflection, with Presentation of a Successful Result in an Adult Case. J. Price-Brown, Toronto.
76 Causes and Treatment of Sterility in the Male. A. Fletcher, Toronto.

75. **New Operation for Septal Deflection.**—To remove the antero-posterior tension Brown makes a cross cut completely through both mucous membranes and cartilage and extending beyond the other two cuts, converting the two straight lines into the letter H. The points to which he draws attention in reference to it are these: First, that as the curvature of the cartilage from above downward gives it a greater width than it would occupy if it were upright in its normal position, the two longitudinal cuts should be so managed as to remove two long slips of the septal cartilage; and at the same time be made at an oblique angle, so that the cut edges can slide over each other. Second, that the cross cut of the H should be very decidedly oblique, cutting through both mucous membranes and cartilage with knife or chisel, so that in replacing the segments the posterior central segment of the septum will slide forward over its fellow and the anterior one backward. It

matters little how these cuts are made if the principle on which they are founded is carried out. The long strips of cartilage might be removed either by drill or swivel saw, or knife or ordinary saw of unusual thickness, or any improved instrument specially constructed for the purpose. The cross cut can be made by either chisel or knife. The immediate result of the combined cuts when made completely through both mucous membranes and cartilage is that all tension is removed, that two rectangular flaps are made by the H incision, the basic blood supply of each being retained, and that they can be pressed with ease into the normal position, their edges sliding over each other. The pieces will bend easily and, sliding over each other, are readily adjusted; they are retained in position by the use of the invaluable rubber splint, a single one on the convex side being the only one needed.

Columbus Medical Journal.

September.

77 *Value of the Leucocyte Count in Cases of Appendicitis. R. P. Daniells, Toledo.
78 Present Position of Radiation in Treatment. G. Sichel.
79 Meeting of American Medical Association and Impressions of Historic Boston. C. P. King, Newark.

77. Leucocyte Count in Appendicitis.—Daniells made careful blood counts in 120 cases, all of which came to operation and were proved to be cases of uncomplicated appendicitis. He found that in the beginning of an acute attack of appendicitis there is, as a rule, a leucocytosis, but that in mild cases no leucocytosis may be present. A rapidly increasing leucocytosis in these acute cases means that the inflammation is increasing and extending, and this is true even when other symptoms show no change or perhaps a slight improvement. When cases do not come under observation until late in the attack and an abscess is already present, there is usually an increase in the white blood cells, but this is dependent on the amount of peristalsis which is allowed to take place.

Archives of Pediatrics, New York.

September.

80 *Weights of the Viscera in Infancy and Childhood, with Special Reference to the Weight of the Thymus Gland. D. Bovaird, Jr., and M. Nicoll, Jr., New York.
81 The Blood Changes in Mumps. I. S. Wile, New York.
82 Does the Bacterial Content of City Milk Influence the Infantile Death Rate? G. W. Goler, Rochester, N. Y.
83 Nervous Children. A. Church, Chicago.

80. Weights of Viscera in Infancy and Childhood.—A study of the average weights of the viscera in infants and children up to the age of five years showed Bovaird and Nicoll that there is a constant relation between the weights of the more important viscera, thus: The weight of the liver will average seven times that of the heart. The weight of the spleen will average one-tenth that of the liver. The weight of the kidney will average one-ninth that of the liver. The weight of the thymus gland as commonly given is excessive, owing to the acceptance of pathologic glands as the standard for normal conditions. The average weight of the thymus at autopsy is approximately 6 grams. There is no evidence of a growth of the thymus after birth under ordinary conditions, but under special conditions the gland does grow and even hypertrophy enormously.

Virginia Medical Semi-Monthly, Richmond.

September 7.

84 Subpectoral Abscess. J. H. Musser Philadelphia.
85 The Treatment of Acute Nephritis. G. F. Butler, Chicago.
86 Antitoxin in Diphtheria. C. T. St. Clair, Tazewell, Va.
87 *Some New Methods in Skin Grafting. J. E. Cannaday, Palat Creek, W. Va.
88 Analysis of Stomach Contents. E. L. Kellogg, New York.
89 Epistaxis. J. Eliot, Washington, D. C.
90 Conservative Operations on the Ovaries. J. M. Baldy, Philadelphia.

87. New Methods in Skin Grafting.—All the practical points in this communication are covered in an article by Dr. Cannaday on the same subject, which appeared in THE JOURNAL, June 2, 1906.

University of Pennsylvania Medical Bulletin, Philadelphia.

September.

91 Premature Separation of the Placenta from Its Normal Position. W. R. Nicholson, Philadelphia.
92 Bone Cysts. G. P. Müller, Philadelphia.
93 *Studies on Phagocytosis. D. H. Bergey, Philadelphia.

93. Phagocytosis.—This article appeared in THE JOURNAL, Aug. 25, 1906, page 580.

Cleveland Medical Journal.

September.

94 Factors in the Surgical Physiology of the Circulation. G. Crile, Cleveland.
95 *Treatment of Typhoid. J. Phillips, Cleveland.
96 Management of Prolonged First Stage of Labor. F. S. Clark Cleveland.
97 *Several Thousand Convulsions in Four-weeks' Old Infant. A. F. Furrer, Cleveland.
98 Case of Malignant Endocarditis. G. S. Smith, Cleveland.

95. Treatment of Typhoid.—Phillips outlines the treatment that was employed in 1,070 cases of typhoid admitted to the Lakeside Hospital in Cleveland. The mortality in these cases was 7.9 per cent. The treatment does not differ from that usually employed. The patient is kept on a soft diet for four days, consisting of softened milk toast, eggs, junket, custard and well-cooked rice. The diet is then increased by the gradual addition of cereals, crackers, scraped beef, creamed chicken, bread and butter, and milk pudding. Milk is given between meals and in the evening. The convalescent diet is the same, with the addition of more meat, fish, potatoes, tea and coffee. The tub bath is used. Cholecystitis was present in 12 cases; intestinal hemorrhage occurred in 63 cases; perforation of the intestine in 29 cases; phlebitis in 42 cases; otitis media in 31 cases; cystitis in 9 cases and pyelitis in 2 cases.

97. Convulsions in an Infant.—Furrer reports the case of an infant four weeks old that had general convulsions, coming on about every five minutes day and night, since the fourth day after birth. No cause for the convulsions could be discovered. The infant was well developed, and in the best of health. Under treatment with castor oil and sodium bromid, one grain every three hours, and mercurial ointment, the baby recovered.

St. Paul Medical Journal.

September.

99 Prophylaxis and Treatment of Prostitution. D. Lewis, Chicago.
100 Mastoiditis. J. G. Parsons, Brookings, S. D.
101 Recent Investigation and Complications of Diphtheria. W. R. Ramsey, St. Paul.
102 Scarlet Fever. H. T. Pippert, St. Paul.
103 Senile Bronchopneumonia. T. G. Stephens, Sidney, Iowa.

Annals of Gynecology and Pediatry, Boston.

September.

104 Pelvic Abscess and Its Treatment. N. MacPhater, New York.
105 Relation of the Major Gynecologic Postoperative Cures to the Country Doctor. H. Hamilton, Harrisburg, Pa.

Kentucky Medical Journal, Louisville.

September.

106 Appendicitis. J. H. Peak, Louisville.
107 Scarlet Fever. E. N. Hall, Woodburn.
108 The Use of Forceps. O. H. Reynolds, Frankfort.
109 Two Cases of Suppurative Synovitis of the Knee Joint. A. M. Crittenden, Ferguson.
110 Blastomycosis. W. R. Burr, Auburn.
111 Fracture of the Clavicle. C. H. Linn, Kuttawa.
112 Relation of the Physician to Sanitation and Hygiene. H. P. Sights, Paducah.
113 Treatment of Pneumonia. A. E. Gardner, Morgantown.
114 Postpartum Hemorrhage. M. H. Sutherland, Harrodsburg.
115 Treatment of Acquired Syphilis. C. P. Price, Harrodsburg.

Journal of the Michigan State Medical Society, Detroit.

September.

116 Cesarean Section for Placenta Prævia Centralis. J. G. Lynds, Ann Arbor.
117 Fatal Case of Eclampsia, After the Delivery of Twins. Remarks on the Etiology and Pathology of the Disease. C. G. Parnall, Jackson.
118 Iodized Catgut. W. T. Dodge, Big Rapids.
119 Systemic Disturbances Secondary to Pathologic Conditions in the Nose. J. E. Gleason, Detroit.
120 Treatment of Tetanus. W. H. Hutchings, Detroit.

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis.

September 1.

121 Pneumonia: Its Present Day Status and Treatment. S. H. Boyer, Duluth.
122 Pulmonary Consumption. L. C. Weeks, Detroit, Minn.
123 State Hospitals for the Insane, their Relation to the Public. E. C. Ericson, Elk Point, S. D.
124 Surgery of the Gall Bladder and Bile Ducts. J. T. Rogers St. Paul.

Buffalo Medical Journal.

September.

125 Etiology of Functional Nervous Diseases. J. W. Putnam, Buffalo.

Journal of the Medical Society of New Jersey, Newark.

September.

126 Value of Tartar Emetic in the Treatment of Traumatic Tetanus and Cerebrospinal Meningitis. D. St. John, Hackensack, N. J.
127 Etiology of Rachitis, Scorbutus and Cretinism. A. A. Strasser, Arlington, N. J.
128 Diarrhea in Infancy and Early Life. I. H. Hance, Lakewood, N. J.

Journal of the Outdoor Life, Saranac Lake, N. Y.

September.

129 Why Rest Is So Essential in the Treatment of Tuberculosis. D. R. Lyman, Wallingford, Conn.
130 Taking the Open Air Cure in Switzerland. N. McL. Carter.
131 Hints and Helps in the Choice of an Occupation. R. A. Harris, Pleasant Grove, Tex.
132 Heated Table for Winter Work Out-of-Doors. L. R. Perkins, Keytesville, Mo.
133 Pennsylvania's Chance to Provide Outdoor Work for Thousands of Convalescents. J. T. Rothrock, Mont Alto, Pa.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

September 8.

1 *President's Address, British Medical Association. R. A. Reeve.
2 Teaching of Anatomy in Universities and Medical Schools. A. Robinson.
3 Dangers to Otology. J. D. Grant.
4 Relation of Gynecology to the Work of the General Practitioner. A. H. F. Barbour.
5 Chairman's Address, Section of Ophthalmology. R. M. Gunn.
6 Proteid Nomenclature. W. D. Halliburton.
7 Chairman's Address, Section of Surgery. H. C. Cameron.
8 An Imperial Pharmacopeia. D. MacAlister.
9 Annual General Meeting, British Medical Association.
10 Report of Work of Sections, British Medical Association.
11 *Ovarian Pregnancy. J. T. Hewetson and J. Lloyd.

1.—See abstract in THE JOURNAL, Sept. 1, 1906, page 705.

11. **Ovarian Pregnancy.**—Hewetson and Lloyd report a case of ectopic gestation which they are satisfied arose within the substance of the ovary. The patient, aged 35, was referred for operation for a supposed subacute appendicitis. Since her last pregnancy menstruation had been quite irregular up to a few weeks of her present illness. She was taken suddenly with severe pain in the lower abdomen, which was followed by symptoms of collapse. Under treatment she improved somewhat and on the following day menstruation began (having been delayed for two weeks) the flow containing many shreds and little pieces. This continued for seven days, the pains recurring from time to time and being most severe in the right lower quadrant of the abdomen. The woman vomited after every meal. On opening the peritoneal cavity about two pints of porter-like fluid escaped, and still more was mopped from the pelvis. A mass of firm clot as large as a fist was removed from the deepest part of the pelvic cavity, being bound by firmer fibrinous clot, which formed the walls of an almost perfect cavity. The uterus was larger than normal, but was otherwise healthy. The right Fallopian tube was normal from end to end; fimbriæ were free and unattached. The right ovary was enlarged, and formed part of the walls of the sac in which the blood clot lay. A ragged opening in its posterior surface toward the pelvic cavity was evidently the source of the bleeding. The ovary and tube were, therefore, tied off with silk close to the uterus and removed. The left ovary and tube were normal. They were not removed. The pelvis was cleaned up with dry sponges and the wound was closed. The patient made an easy recovery. Chorionic villi were found embedded in the fibrin lining of the cavity. These findings, the authors believe, justify them in concluding that this was a case of primary implantation of a fertilized ovum within the substance of the ovary, and that by gradual distension and thinning of the part nearest to the surface rupture of the sac followed with expulsion of the mole into the pouch of Douglas. The adjoining ovarian stroma was intensely vascular, suggesting an intervillous circulation.

The Lancet, London.

September 8.

12 The Evolution of Insanity. R. Jones.
13 *Epidemic Cerebrospinal Fever. J. L. Steven.
14 *The Submucous (or Window) Resection Operation for Correction of Deflections of the Nasal Septum. E. F. Potter.
15 Presence of the Bacillus Typhosus or a Closely Allied Organism in a Sample of Distilled Water Suspected to Have Caused Typhoid Fever. R. W. C. Pierce and J. C. Thresh.
16 The Therapeutic Action of the Iodids. J. Burnet.
17 *Three Cases of Twisted Pedicle. W. G. Sutcliffe.
18 A Presumed Case of Acute Yellow Atrophy of the Liver. W. C. Hayward.
19 Preliminary Note on a New Spirochete Found in a Mouse. A. Breinl and A. Kinghorn.
20 *Case of Intussusception, Illustrating the Fallacies and Dangers of the Inflation Treatment. J. L. Falconer.
20½ First Report of the Expedition to the Amazon, 1905. H. W. Thomas.

13. **Epidemic Cerebrospinal Fever.**—In a lecture on this subject Stevens reviews the clinical history of the disease and emphasizes its specific origin, the diagnosis of lumbar puncture and the frequency of the disease in sporadic form.

14. **Submucous Resection Operation.**—Potter endorses the value of this operation and its superiority over other operations for deflections of the nasal septum.

17. **Twisted Pedicle.**—The three cases reported by Sutcliffe occurred in females, aged 15, 21 and 48 years, respectively. In the first case the diagnosis of appendicitis was made, but at the operation the disturbance was found to have been caused by a thin-walled cystic tumor which sprang from the left broad ligament. The second case also was one of left broad ligament cyst, the pedicle of which was twisted on itself three times. The third case was one of right broad ligament cyst with the pedicle twisted into a knotted ropelike cord. There was also a dermoid tumor of the right broad ligament.

20. **Case of Intussusception.**—In the case reported by Falconer the tumor was made to disappear by water inflation, but reappeared after each treatment. The intussusception was of the ileocecal variety. Falconer states that when an acute intussusception has existed for 30 hours the patient should be subjected to rational and scientific surgery without delay.

Indian Medical Gazette, Calcutta.

July.

21 The Spread of Plague. S. Browning-Smith.
22 Natural History of Plague. A. F. Stevens.
23 How Plague is Spread. E. F. G. Tucker.
24 Plague in the City of Madras. T. S. Ross.
25 How Does Plague Spread? A. M. Elliot.
26 Effects of Rat Extermination on the Incidence of Plague in a Selected Area in Azamgarh City. J. W. Walker.
27 How Plague is Spread. C. A. Gill.
28 An Experimental Investigation as to the Potency of Various Disinfectants Against Rat Fleas. W. M. C. Hossack.
29 Rat Killing for Prevention of Plague. G. King.

August.

30 The Supply of Drinking Water in India and Its Connection with the Subsoil Water. A. W. Dawson.
31 Couching of the Lens, as Practiced by Native Practitioners in India. R. H. Elliot.
32 Extraction of Cataract in the Capsule. H. Smith.
33 Cataract Expression (Smith's Operation). F. P. Maynard.
34 Extraction of Cataract in the Capsule versus the Ordinary or Capsule Laceration Method. H. Gidney.

Journal of Tropical Medicine, London.

September 1.

35 The Bacillus of Hamilton Wright, Obtained from Two Cases of Acute Beriberi. L. S. Dudgeon.
36 Beriberi: Mouldy Rice; the Occurrence of Beriberi in the Sokor District. J. D. Gimlette.

Presse Médicale, Paris.

37 (XIV, No. 64.) *Sur la pénétration des poussières minérales et des graisses à travers les parois du tube digestif (penetration of mineral dust and fats through the walls of the digestive tract). P. Vansteenberghe and P. Sonneville.
38 Lean Diabetes as Sequel to Mumps.—Diabète maigre post-ourlien. Laignel-Lavastine.
39 Bromatologie clinique du pain (of bread). A. Martinet.
40 (No. 65.) A propos de l'appendicite. J. L. Faure.
41 Du tremblement palustre. Jourdran.
42 Traitement de la coqueluche par le chloroforme (whooping cough). H. de Rothschild.
43 Quelques points du traitement médical en gynécologie. A. Martinet.
44 (No. 66.) *L'ulcère peptique du jéjunum. A. Gosset.
45 Du promontoire du bassin (of pelvis). R. Robinson.
46 L'état actuel de la médication phosphatée. S. Posternak.
47 Success of Arsenic in Treatment of 8 Children with Whooping Cough.—Traitement de la coqueluche par l'arsenic. J. de Nittis.
48 (No. 67.) Study of Intoxication from Tobacco.—Sur quelques lésions de l'intoxication tabagique expérimentale. A. Gouget.
49 *Success with Sodium Bicarbonate in Cholera.—Traitement du choléra. A. Thébaud.
50 (No. 68.) Emploi du bromure de potassium dans l'épilepsie. J. and R. Voisin.
51 La flore microbienne de l'ulcère des pays chauds. Boucher.
52 *Le surmenage algue (overwork). M. Champeaux.

37. **Passage of Mineral Dust Through the Walls of the Digestive Tract.**—This communication from Calmette's Pasteur

Institute at Lille states that fine particles of mineral dust and fats are able to pass through the walls of the digestive tract with such facility that deposits are found in the lungs more extensive than when the same substance is inhaled directly into the lungs. Finely pulverized charcoal, India ink, vermillion and lamp black were fed to laboratory animals. It was invariably found that these insoluble particles insinuated themselves between the epithelial cells and then were incorporated secondarily by the phagocytes which carried them to the lung parenchyma without delay. This occurred without the slightest lesion in the intestinal wall. See summary of previous communications, page 972.

44. Peptic Ulcer of Jejunum.—Gosset gives an illustrated description of a case of pyloric stenosis treated by transmesocolic posterior gastroenterostomy. Two years later a peptic ulcer in the jejunum perforated into the transverse colon. The jejunum and transverse colon were isolated and ileosigmoidostomy done, followed by the complete recovery of the patient, a man of 42. The subject is discussed from a number of standpoints, with numerous citations from the literature. The most important conclusion drawn is the necessity for medical treatment, long continued, after gastroenterostomy, in persons inclined to hyperacidity. The anastomosis should be located as far as possible from the pylorus, and a suitable diet and medical treatment should be kept up for years afterward to prevent danger from peptic irritation.

49. Sodium Bicarbonate in Cholera.—Thébaud says that he has attended 1,354 cases of cholera during seven years of practice in Indo-China. He had the disease himself once and, tortured by thirst, he drank copiously of Vichy water notwithstanding his incessant vomiting. From that moment his condition notably improved. This fact, and Auerbach's assertions in regard to the pronounced bactericidal action of sodium bicarbonate in his laboratory tests at Kharkoff, encouraged Thébaud to try an alkaline treatment. The 8 patients thus treated all recovered, although the prognosis had been absolutely bad. At the first serous stool during an epidemic he gives 50 gm. of rum, believing that alcohol favors the defensive reactions of the organism. He then gives a dessertspoonful every hour of a mixture of 20 drops of laudanum in 250 gm. water. Larger doses depress. When the symptoms show signs of aggravation he makes a subcutaneous injection of 2 gm. of sodium bicarbonate in 20 gm. of distilled water. Two hours afterward the patient is given a 3 per 1,000 solution of sodium bicarbonate to drink freely, up to three quarts a day, regardless of the persistence of the vomiting. If the condition has not improved in 15 hours he gives another subcutaneous injection of the sodium bicarbonate. The patients are kept warm by a native method of two or three charcoal braziers under the bed, with a blanket reaching to the floor all around, but held up away from the patient by three hoops fastened to the sides of the bed. Warm air, heated to about 45 C., is thus constantly circulating around the body. The 8 patients thus treated all recovered without a mishap, while the epidemic had been constantly fatal up to this time.

52. Signs of Overwork.—Champeaux defines the word he uses—"surmenage"—as the result of the loss of balance between the cellular nourishment and functional production. It occurs when the food is sufficient for normal work, but the amount of work is above normal; when the work is normal, but the nourishment is below what is required under these conditions; when the work is normal, but the supply of food is overabundant. The minor signs of the condition are "fatigue fever," and irresistible desire to sleep at times during the day, and much thirst with loss of appetite. A condition of autointoxication is aggravated sometimes and serious symptoms follow exposure to extremes of temperature, either very high or very low. He has found the blood unduly thick under these conditions. When work makes one hungry the physiologic limits have not been passed, but this may be assumed when the organism demands large amounts of water to wash out toxic accumulations while the cells refuse to take up more nourishment, as they are already clogged with waste, and the patient is very thirsty, with no appetite.

Berliner klinische Wochenschrift.

53 (XLIII, No. 27.) *Ueber Hyperämiebehandlung der Lungentuberkulose. H. Leo.
54 Blood Pressure and Influence of Food in Experimental Nephritis.—Experimentelle Untersuchungen ueber das Verhalten des Blutdrucks bei Urannephritis und ueber den Einfluss der Nahrung bei verschiedenen Nephritisarten. J. Brodzki.
55 *Zur Pathologie der Basedow'schen Krankheit. M. Bernhardt.
56 Fälle chronischer Ruhr unter dem Bilde eines Mastdarmcarcinoms verlaufend (dysentery simulating rectal cancer). C. A. Ewald.
57 The Seashore for Scrofulous Children.—Therapie der Skrophulose. B. Salge.
58 (No. 28.) *Bedeutung der Jackson'schen Epilepsie für die topische Hirn-Diagnostik (diagnosis of focal lesions). K. Bonhoeffer.
59 *Radiograms After Injection of Oxygen Into a Joint.—Ueber Röntgenbilder nach Sauerstoffeinblasung in das Kniegelenk. A. Hoffa.
60 Ueber das Verhalten von Organ-Rezeptoren bei der Autolyse, speziell der tetanusbindenden Substanz des Gehirns. A. Wolff-Eisner and A. Rosenbaum.
61 *Retrograde Current in Esophagus as Cause for Coated Tongue.—Rückläufige Strömung in der Speiseröhre als Erklärung der belegten Zunge. L. Kast.
62 *Heilbarkeit der chronischen Gastritis (curability). P. Rodari (Zurich).
63 Injuries from Firearms of Small Caliber.—Ueber Kleinkaliberschussverletzungen. Kettner.

53. Hyperemia in Treatment of Pulmonary Tuberculosis.—Leo has been experimenting for nearly three years with hyperemia in the treatment of pulmonary tuberculosis. Theoretically, he says, everything is in favor of striving to influence the disease by inducing hyperemia artificially. This can be accomplished only, he thinks, by passive congestion. The best means of obtaining this is by having the patient recline with the chest lower than the rest of the body, the legs raised, and also the head. This mode of reclining should be systematically applied every day, gradually lengthening the time each day and having the patient sleep with merely the head slightly raised. It still remains to be decided whether more active measures, suction apparatus or tuberculin treatment can be successfully combined with this method. It seems rational, he says, to suppose that the action of tuberculin would be enhanced by this passive congestion. He has applied this method of treatment in 30 cases, and the results encourage him to advocate its more general use. Jacoby, Weicker and Link have previously called attention to the advantages of this means of influencing tuberculous pulmonary processes. A tendency to hemoptysis is an absolute contraindication.

55. Pathology of Exophthalmic Goiter.—Bernhardt reports a case in which exophthalmic goiter was observed in a patient with cervical ribs. In another case exophthalmic goiter was followed by tabes in a man who had worked up a large business as a baker, and frequently had to pass from his work in the baking rooms to the cold store where the goods were sold, and who was always overworked. His wife worked with him, and after seven years of marriage and the birth of two children, she also began to exhibit symptoms of exophthalmic goiter which at present, two years later, is pronounced.

58. Jacksonian Epilepsy as Guide to Focal Affections.—Bonhoeffer reviews his experiences with Jacksonian epilepsy in respect to topical diagnosis of cerebral affections, describing 4 cases in which the autopsy findings did not correspond with the diagnosis based on the epilepsy. He has become convinced that Jacksonian epilepsy must be regarded as a frequent symptom of organic affections of the central convolutions. Also as a symptom of a focus in the same hemisphere but remote from the motor cortex. Cortical epilepsy from foci on the opposite side seems to be more frequent with affections of the cerebellum. In this case the spasm is on the side of the brain focus, and the irritation is transmitted by the cerebellar tracts passing to the cortex. In case of a general predisposition to epileptic seizures, owing to genuine epilepsy or chronic alcohol or other intoxication, unilateral spasms occur in case some old focus is located somewhere in the corresponding half of the brain. These unilateral spasms frequently show their connection with genuine or alcoholic epilepsy by the coincident unconsciousness. Jacksonian epilepsy may exist without a discoverable anatomic foundation. Cortical epilepsy may be the expression of internal hydrocephalus. Repeated cortical seizures in connection with other focal and general brain symp-

toms may impose the clinical diagnosis of an abscess or tumor in the brain and yet the autopsy findings may be negative.

59. **Radiograms After Injection of Oxygen into a Joint.**—Hoffa reproduces a number of very instructive radiograms taken after oxygen had been forced into the interior of the joint. The oxygen casts no shadow and the parts stand out in relief against this white background while the distension from the oxygen differentiates the various parts. Hoffa has modified the Woilenberg apparatus somewhat to adapt it for clinical use. The oxygen is generated in a tank by catalysis of peroxid of hydrogen under pressure, small tablets of potassium permanganate serving as a catalyzer. He regards the method as a distinct and valuable progress in the recognition and treatment of joint affections. Aseptic injection of oxygen is harmless and in certain cases even beneficial.

61. **Retrograde Current in Esophagus.**—Kast noticed that lycopodium seeds introduced into the stomach found their way into the mouth again. Experimental research and tests on various persons have confirmed the existence of a retrograde current in the esophagus. He thinks that this is probably the cause of the coated tongue. Pyrosis in some cases may be merely the reaction of the esophagus to the acid gastric juice finding its way upward. Study of the coated tongue may prove instructive for diagnosis.

62. **Curability of Chronic Gastritis.**—Rodari reports cases of chronic gastritis cured by appropriate diet and individualized drugs. He has found that bitters and stomachics are of little use, but has obtained excellent results from a combination of papain with peroxid of magnesium, with or without benzonaphthol and sodium bicarbonate. He relates details showing the benefits of appropriate treatment and the injury that may result from prolonged use of astringents or salines. Pepsin he found useful only when sufficient hydrochloric acid is present at the same time; it thus does no good in case of achylia. Papain answers the indications here, 1 gm. of papain being able to peptonize 200 gm. of albumin. His experience has shown, he claims, that most forms of chronic gastritis, if they are not complicated by extreme atony or gastrectasia, can be cured in a comparatively short time.

Centralblatt f. Chirurgie, Leipsic.

Last indexed, page 78.

64 (XXXIII, No. 22.) *Zur Behandlung der paralytischen Hüftgelenks-Luxation mittels Arthrodese (carbolic treatment of hip joint). S. Kofmann (Odessa).
65 Exstirpation des Penis mit Resektion des Skrotum. P. Janssen.
66 (No. 23.) Eine neue Methode der Gastrostomie. E. Tavel (Berne).
67 *Zur Technik der Darmvereinigung (union of stumps of intestine after resection). Wendel (Magdeburg).
68 (No. 24.) *Significance of Cracked Pot Sound in Abdomen.—Bedeutung des Bruit de pot félé am Abdomen. F. v. Mangoldt.
69 Plastic Operations of Pelvis and Perineum.—Der Unterschied zwischen Beckenbodenplastik und der Dammplastik mit Rücksicht auf den Rektal-Prolaps. C. Hofmann.
70 (No. 25.) Wund-Behandlung nach Transplantationen (treatment after transplantation) A. Weischer.
71 Treatment of Old Fractures of Neck of Femur.—Zur Behandlung veralteter Schenkelhalsbrüche. M. Herz.
72 (No. 26.) *High Hemorrhoids as Cause for Occult Hemorrhage.—Ueber hochsitzende Hämorrhoiden als Ursache von okkulten Darmblutungen. E. E. Goldmann.
73 Eine neue Klemme zur Gastroenterostomie und Enteroanastomie (new clamp forceps). Linnartz (Cologne).
74 (No. 27.) *Zur Behandlung mit Bier'scher Stauungs-Hyperämie. Tomaschewski (St. Petersburg).
75 (No. 28.) *Zur Behandlung der tuberkulösen Fisteln mit der Bier'schen Saug-Glocke (suction vessels). K. Gaugele.
76 Report of XXXV German Congress of Surgery, April 4-7, 1906, Berlin.
77 (No. 29.) Zur offenen Wundbehandlung von Haut-Transplantationen (open treatment). E. Goldmann.
78 Pharyngotomia suprahyoidea. J. K. Spisharny (Moscow).
79 (No. 30.) *Exposure of Heart in Case of Injury.—Die Freilegung des Herzens bei Herzverletzungen. Wilms.
80 Ein einfacher Ligatur-Träger (ligature holder). O. Ehrhardt (Königsberg).

63. **Treatment of Paralytic Dislocation of Hip with Carbolic Arthrodesis.**—Kofmann has been applying Mencier's method of "phenarthrodesis" in 6 cases of paralytic dislocation of the hip, and has been much pleased with the results. This method insures the head of the femur remaining in its place without entirely inhibiting all movement, as the parts are held in place by a more or less yielding connective tissue fixation while the relaxed and overstretched muscles become contracted. The joint is opened, the cartilaginous cover of the head of the femur is removed, and the acetabulum is scraped with partial removal of the synovial membrane and the ligamentum teres. The head of the femur and the acetabulum are then swabbed out with carbolic acid. The tissues treated with the phenol are copiously flushed with 90 or 96 per cent. alcohol, and then rinsed with physiologic salt solution. The wound is then sutured without drainage and the limb immobilized in slight abduction with outward rotation. There was elevation of temperature for a day or so in all his cases, after which the wound healed rapidly and smoothly by primary union with a shortening of 2 or 3 cm. in the limb. The results a year later confirm the excellent results obtained by this fibrous arthrodesis.

67. **Button for Intestinal Anastomosis.**—Wendel describes and illustrates a modification of the Murphy button which does away with the necessity for crowding so much of the intestine on the button. He avoids this by having the space between the inner and outer cylinders somewhat wider than usual, and having a wide ring with two grooves slide over the innermost cylinder. The intestine is tied in the lower groove, and any superfluous intestinal tissue is cut off by running the knife around in the groove above. The cut end of the intestine is thus brought into the space between the male and female parts of the button.

68. **Cracked-Pot Sound in the Abdomen.**—Mangoldt remarks that whenever the cracked-pot sound is heard over the abdomen it signifies abnormal accumulation of fluids and of air and compression, or constriction of the intestines. In 5 cases he discovered this cracked-pot sound two or three weeks after inflammation of the cecum. It was accompanied by a return of temperature. He assumed that the sound came from an abscess in front of the cecum, but the operation in every instance showed that the abscess was located behind the cecum and extended behind the ascending colon. In case of abscess formation in front of the cecum this cracked-pot sound was never detected. It may be regarded, therefore, as a differential sign of a retrocecal abscess, especially when heard regularly at the same spot, generally the outer margin of the rectus muscle toward the anterior superior spine. This sound was observed further in case of constriction of the intestine from kinking, with a sarcoma of the intestine and with cicatricial stenosis. The sound indicates narrowing or constriction of the gut and may point directly to the site of the constriction. He has also heard it temporarily over the sigmoid flexure after an enema, also when the abdominal walls were relaxed over a dilated and downward displaced stomach, and, finally, in case of diastasis of the abdominal walls after a laparotomy.

70. **Treatment After Thiersch Transplantation.**—Weischer states that open treatment has not given him good results except in cases in which the secretion was minimal. When the granulating surfaces show strips of yellow indicating the presence of pus corpuscles, he slices off the upper stratum of the granulations, after application of an Esmarch tourniquet. After removal of the tourniquet he checks possible hemorrhage by applying mull compresses dripping with physiologic salt solution and bound firmly on the wound. As the heat subsides he pours hot water on the dressings to keep them at the same temperature. He has never had to wait more than 10 or 15 minutes before he could proceed with the transplantation. When this is completed he covers the surface with mull and cotton, both dipped in warm 0.8 per cent. salt solution. A wire frame is placed over the limb or the body to keep the bed clothes from touching the parts. Every two or three hours fresh warm salt solution is poured over the dressings until the patient feels the warmth. The secretions dissolve in the salt solution and are absorbed by the dressings, while the moisture keeps the edges of the flaps from drying and sticking before the healing from the center outward has reached them.

72. **Anemia from High Hemorrhoids.**—Goldmann reports some cases to confirm the danger of anemia from hemorrhoids located so high in the rectum that they escape casual examination. In one case they were 10 and in another 18 cm. above the anus.

74. **Bier's Passive Congestion.**—This communication states that the technic of passive congestion induced with a con-

stricting band has been applied in 86 cases of furuncles, carbuncles, abscesses, defective consolidation after fracture, and postoperative suppuration. The results are said to have been brilliant in every instance.

75. **Passive Congestion in Treatment of Tuberculous Fistulæ.**—Gaugele has combined passive congestion with suction therapy in treatment of tuberculous fistulæ, with excellent results. In one case a weakly lad with three long rebellious fistulæ was promptly cured by the application of suction vessels. When a fistula healed over he examined if there were a trace of secretion below the new skin. If so, he punctured the new skin and applied the suction vessel with very weak suction. In this way he was able to keep the fistula clean, and it then rapidly healed.

79. **Exposure of Heart After Injury.**—Wilms recently had occasion to operate in a case of bullet wound of the heart. Two hours after the injury he sutured the holes, taking three stitches in each. Considerably more than a liter of blood was found in the chest, but the patient recovered without reaction. Wilms gained access to the heart through an intercostal incision without attempting to cut an extensive flap. It allowed ample access to the front and rear of the heart while the whole operation was so rapid, simple and free from hemorrhage, that he advocates an incision in the fourth or fifth interspace as the standard procedure in such cases.

Centralblatt f. Gynäkologie, Leipsic.

Last indexed, page 78.

81 (XXX, No. 18.) Ueber die Bossi'sche Dilatation bei vorzeitiger Losung der Placenta (premature detachment). R. Jolly.
82 *Erster Fall von späterer Geburt nach subkutaner Pubiotomie (first case of subsequent childbirth). K. Reifferscheid.
83 Fall von Gangraena phlegmonosa vulvae bei einer Schwangeren (in a pregnant woman). L. Goth.
84 (No. 22.) *Pelviplastik. B. Credé (Dresden). Criticism in No. 30 by R. Klien.
85 Simplification of Pelvic Measurement.—Eine Vereinfachung der v. Bylicki'schen Beckenmessmethode. J. Faust.
86 *To Detect Fetal Heart Sounds Before End of First Half of Pregnancy.—Ein Handgriff zum leichteren Auffinden der kindlichen Herztöne vor Ende der ersten Schwangerschaftshälfte. M. Schwab.
87 *Ueber Röntgen-Bestrahlung der Ovarien in der Gravidität. O. O. Fellner and F. Neumann.
88 (No. 23.) *Ueber Lumbal-Punktion bei Eklampsie. J. Thies.
89 *Ueber Indikationen zum künstlichen Abort. G. Ahlfeld.
90 Vaginaler Sectio cesarea bei Retroflexio uteri gravidi cum Incarceratione. A. Bennecke.
91 (No. 24.) *To Enhance Resisting Powers of Peritoneum.—Resistenz-Erhöhung des Peritoneums gegen Infektion mittels Nuklein-Säure, eine prophylaktische Massnahme um die Morbidität und Mortalität nach der abdominalen Radikal-Operation des Gebärmutterkrebses herabzusetzen. W. Hannes.
92 *Zur Aetiologie und Therapie der Eklampsie im Puerperium. W. Liepmann.

82. **Childbirth After Pubiotomy.**—The patient with extremely contracted pelvis on whom Reifferscheid first performed extramedian symphyseotomy or pubiotomy, was recently delivered of another living child without the necessity for further enlargement of the pelvis. A fibrous cicatrix had formed at the point of section, and this loosened during the pregnancy and stretched during delivery.

84. **Plastic Operation on Pelvis.**—Credé aims to enlarge the pelvis permanently, not merely during delivery. He has worked out a technic on the cadaver and has recently applied it with gratifying success in a clinical case. He advocates performing the operation at the beginning of pregnancy or even before conception, in case of a very contracted pelvis, or when much depends on bringing healthy children into the world, even if the pelvis is not very much deformed. His technic includes sawing the pubic bone at two points, the first section passing downward through the body and the second through the horizontal ramus. The part between is completely detached by a third, nearly horizontal, section slanting from the center of the first section to the obturator foramen. The part thus detached is transplanted forward between the halves of the severed body of the pubic bone, thus holding them permanently apart at a distance of 2 cm. The article is illustrated. In the case in which he operated to facilitate delivery the wound healed without reaction or temperature.

86. **To Detect Fetal Heart Sounds Early.**—Schwab advises pushing the contents of the uterus up, forcing them against the roof of the fundus. This he accomplishes by placing the right hand at a right angle to the body, just above the symphysis, and pressing gently downward vertically and then upward toward the fundus. He then applies the stethoscope to the most bulging portion of the abdomen, a little above the umbilicus. The fetal heart sounds become distinctly audible with this technic, even before the middle of the fourth month.

87. **Roentgen Exposure of Ovaries During Pregnancy.**—The researches on rabbits described demonstrate that Roentgen exposures of the ovaries induce degeneration of the ovary and arrest the growth of the fetus. The phenomena observed indicate that the functional activity of the ovary, especially its internal secretion, is not without significance for the continuance of the pregnancy during its first half at least.

88. **Lumbar Puncture in Eclampsia.**—Thies states that 7 of the 15 patients treated by lumbar puncture died, a mortality of over 42 per cent. The pressure of the cerebrospinal fluid was unusually high in all but one case. The prognosis seemed to be better in the cases with lowest pressure. An effect from the lumbar puncture was evident in only a few of the cases. Profound coma was apparently relieved in some instances.

89. **Indications for Artificial Abortion.**—Ahlfeld urges general practitioners to be careful about telling their patients that artificial interruption of the pregnancy is necessary. Careful study of the case and treatment in a hospital of the underlying trouble suggesting abortion may frequently render it unnecessary. In any event, he says, when referring the patient to a specialist, write the particulars instead of telling the patient what to ask for.

91. **To Enhance Resisting Powers of Peritoneum in Cancer Operations.**—Hannes reports from Küstner's clinic that in 51 cases he injected 50 c.c. of a 2 per cent. solution of nucleic acid, in the form of sodium nucleiate, about 13 hours before an abdominal operation for carcinoma of the cervix. The results, on the whole, were gratifying, and he is convinced that these injections will prove a valuable aid in enhancing the resistance of the peritoneum to infections. The reaction was always striking; the temperature rose one or two degrees C., with a chill in three cases. Marked hyperleucocytosis was evident in blood drawn from the lobe of the ear in nearly every case. He does not think that much can be anticipated from the injections when the resisting powers are at a low ebb. In case of cachexia or existing infection it may prove possible to immunize the patients by preliminary injection of killed cultures of streptococci, according to Polano's technic. He is now testing this, sometimes combining it with the nucleic acid injections.

92. **Treatment of Eclampsia.**—Liepmann ascribes eclampsia to retention in the liver of toxins generated in the placenta. The liver, for some reason, is unable to neutralize them. During the lowering of the vitality by the birth process, these unneutralized toxins pass into the circulation and, in case of a predisposition, affect the brain, kidneys or both, and induce the syndrome of eclampsia. If the toxin injures principally the kidneys, then the symptoms will be scanty urine, with albumin and casts. From 2,000 to 4,000 c.c. of physiologic salt solution should be injected, he states, with venesection in case of plethora, and three times a day a powder should be given containing diuretin (theobromin sodium salicylate) 1 gm., and pulv. digitalis leaves and trit. camphor, each 0.1 gm. If the toxin affects the heart, the pulse will be rapid and fluttering, and caffein and camphorated oil should be injected subcutaneously. If the toxin affects the brain there will be coma, superficial respiration from paralysis of the respiration center, edema of the lungs and convulsions. Treatment of this group of symptoms should include artificial respiration kept up for days with half-hour intervals, and during the pauses slapping with cold water and cold packs. Narcotics should be given as little as possible; the best, he states, is an enema of 3 gm. chloral at a dose, with morphin only in case of the greatest agitation, 0.03 gm. at a dose. In his experience the artificial respiration and slapping with cold water have saved many patients who were apparently moribund. The details of symptoms and treatment in two such cases are given in tabulated form.

Münchener medizinische Wochenschrift.

93 (LIII, No. 26.) *Foreign Bodies and Roentgen Rays.—Fremdkörper und Rontgenstrahlen. R. Grashey (Munich).
94 Measurement of Diastolic Blood Pressure.—Ueber die Messung des diastolischen Blutdruckes beim Menschen. A. Bingel.
95 *Action of Coffee and Cocoa on Secretion of Gastric Juice.—Die Wirkung des Kaffees und des Kakaos auf die Magensaftsekretion. L. Pincussohn.
96 Zur Kasuistik der Poliomyelitis anterior acuta adultorum. O. Bruns.
97 Die Anwendung des Tuberkulin neu bei der Behandlung von Lungen-Schwindsucht (phthisis). F. Kruger.
98 Zur Opium-Behandlung der Larynx-Stenose im Kindesalter. A. Hecht.
99 *Relocation of Special Points in Microscopic Preparations.—Ein einfacher Apparat zur Wiederauffindung bestimmter Stellen in mikroskopischen Präparaten. Sachs.
100 Specialists and Specialties.—Ueber aerztliche Spezialitäten und Spezialærzte. H. Quincke (Kiel).
101 (No. 27.) *Symptome der Stirnhirnerkrankung (affections of frontal lobe). G. Anton.
102 *Zur Kenntnis der Achylie des Magens. H. Leo.
103 *Zur Therapie der Oesophagus-Stenosen. D. Gerhardt.
104 Zur Frage der Katgut-Sterilisation (comparative tests). O. v. Herff.
105 Simplified Measurement of Pelvis.—Eine einfachte Messung. C. J. Gauss.
106 Ueber den Nachweis der Spirochæta pallida bei tertiärer Syphilis. E. Tomasczewski.
107 Ueber den diagnostischen Wert des Spirochäten-Nachweises bei Lues congenita. M. Simmonds.
108 Ganglion Cell and Nerve Fiber.—Ganglienzelle und Nervenfaser. A. Kohn.
109 *Das Chromo-Saccharometer, ein neuer Apparat zur quantitativen Zuckerbestimmung im Urin. E. Bendix and A. Schittenhelm.
110 *Special Clinical Features of Mental Affections in Inhabitants of Cities.—Die klinischen Besonderheiten der Seelenstörungen unserer Grossstadtbevölkerung. R. Gaupp. (Concluded.)

93. **Foreign Bodies and Roentgen Examination.**—Grashey describes a number of devices that have aided him in locating foreign bodies with the Roentgen rays. He says that a needle that has been in the body for several years gradually becomes liquefied and the process can be watched with the rays.

95. **Action of Coffee and Cocoa on Secretion of Gastric Juice.**—Pincussohn gives a number of curves showing the abrupt increase in the amount of gastric juice secreted after ingestion of coffee or cocoa deprived of its fat. The tests were made on dogs with a Pawlow fistula and confirm the empiric findings. Tea has an opposite effect, tending to reduce the secretion.

99. **To Locate Special Points in Microscopic Preparations.**—Sachs-Müke has devised an appliance with which it is possible to center a specimen for microscopic examination, bringing always the same spot at any time within the field. His appliance fits permanently on the microscope, and marks three points on the specimen, which can then be taken out and replaced in the microscope at any time, fixing the points previously marked, which brings the desired part of the specimen directly under the eye.

101. **Symptoms of Affections of Frontal Lobe.**—Anton comments on the frequency of traumatic affections and of infectious processes in the frontal lobes and the necessity for early recognition of the symptoms by the general practitioner. The frontal part of the brain is a paired organ, and the various parts are again connected with a paired organ, the cerebellum. In these organs substitution and compensation for a focal affection are frequently observed. For this reason the symptoms of impaired functioning are less sharply defined than in other parts of the brain. Among the most prominent symptoms are the disturbances in the balancing of the body in standing and walking, the same as in a cerebellar affection, and also changes in gait and attitude. The "higher coördination" of the arms is also liable to be disturbed. The vicinity of the motor region frequently entails complications with paresis, spasms or motor aphasia. In a focal affection of the orbital frontal brain, loss of the sense of smell on one or both sides is important for the local diagnosis. An affection of the septum lucidum does not seem to be accompanied by this symptom. Unilateral disturbance in the frontal lobe does not entail any special mental symptoms, but bilateral disturbance, with involvement of the corpus callosum, induces a syndrome not unlike that of progressive paralysis. In many cases, Anton states, diagnosis is only possible by combination of the above physical symptoms with various psychic disturbances. The latter do not depend on the localization alone, but also on the nature, course and intensity of the focal affection.

102. **Gastric Achylia.**—Leo declares that functional testing of the stomach is too much neglected. He regards Sahli's desmoid test as a valuable aid in examination to supplement other tests, and he has found that the little bags can be kept indefinitely in glycerin, which is a great convenience. In regard to his experience with gastric achylia and the means to detect it, he remarks that there is no evidence to date that achylia can occur without some anatomic changes in the stomach. The pains in the stomach are generally mild, merely a sensation of burning or pressure, or there may be no pains at all. In other cases they may occur with great severity and even after eating, simulating the findings with hyperacidity. The stools may be regular or there may be severe chronic diarrhea or constipation. The combination of agar-agar and minute doses of cascara have proved effectual in the severe constipation in these cases, although it must be kept up indefinitely as it has only a symptomatic action. He knows of no drug that will restore the missing gastric secretion in achylia; the only way to relieve it is to supply the lacking pepsin and HCl. His formula is 10 gm. dilute hydrochloric acid with 10 gm. dry pepsin and 50 gm. distilled water. The dose is a teaspoonful in water at each meal, and some of his patients say that they could not now exist without it. The Sahli desmoid reaction gives positive findings under this medication when always negative before.

103. **Morphin in Treatment of Stenosis of Esophagus.**—Gerhardt reports a number of cases of traumatic or cancerous stenosis of the esophagus in which the patients were relieved to a remarkable extent by small doses of morphin, about 15 drops of a 1 per cent. solution before meals, and a liquid diet. In one of the cases described, the esophagus was completely closed and any attempt to introduce a sound induced hemorrhage. Under the morphin the ability to swallow fluids was restored and the pain during the swallowing was abolished. The morphin, of course, can do no good when the esophagus is closed absolutely by tissue growth, but the presence even of a comparatively small new growth or stricture is liable to induce spasmodic closure of the lumen, and it is in such cases that the morphin proves useful.

109. **Colorimetric Determination of Sugar in Urine.**—The urine is first tested for the presence of grape sugar. Equal parts of the urine and of 10 to 15 per cent. solution of potassium or sodium are then boiled for one or two minutes and set aside to cool. The mixture is then poured into a graduated tube to a certain mark and the color is compared with that of a standard tube containing a brown fluid of the exact shade of the urine containing 1 per cent. of sugar, boiled with soda solution. If the tint of the urine to be tested is lighter than that of the standard tube there is less than 1 per cent. sugar in the urine. If the tint is darker the urine is diluted until the tint is like that in the standard tube. Comparison of the findings with this simple test, which only requires three or four minutes in practiced hands, shows that the technic is as delicate and reliable as other technics in vogue, while its simplicity and rapidity commend it, especially for the general practitioner. The test does not require over three or four minutes in all.

110. **Mental Affections in Inhabitants of Cities.**—This review of extensive personal experience in psychiatry at Munich concludes with the statement that only from 20 to 25 per cent. of the patients were brought up in a large city, while the remainder came from the country. This suggests the possibility that city life is particularly trying for those not brought up in it from childhood. The mental affections of city people do not differ essentially from those of country people. In treatment prolonged baths have been found very useful. He calls attention to the frequency of the combination of traumatic neurosis with premature arteriosclerosis, and the evidence he has accumulated in regard to intolerance of alcohol as a consequence of trauma.

Hygiea, Stockholm.

Last indexed, page 903.

111 (LXVIII, No. 4.) *Bidrag till kännedomen om sinnessjukdomarnas familiära uppträdande. E. Vestberg. (Concluded in No. 6.)
112 Om förekomsten af tuberkulos på anstalter för sinnessjuka och åtgärder för dess bekämpande. H. Lundborg.

113 Statistics in regard to Consumptives.—Huru stort är antalet lungsotspatienter inom Västernorrlands län? F. Kaijser.
114 (No. 5.) *Om mesenterial-cystor. J. H. Akerman.
115 Intra-abdominal Hernia.—Ett fall af intra-abd. bråck. E. S. Perman.
116. (No. 6.) *Om diafragmabråck jämte beskrifning af ett sådant (hernia of diaphragm). E. G. Johnson.
117 (No. 7.) Den medicinska doktorsgraden. E. Müller.
118 *Elektrokemisk terapi. G. Heüman.

111. **Family Groups of Mental Affections.**—Vestberg gives the detailed pathologic history of 26 families containing several members with mental disorders. He compares these statistics with those published by Vorster, Krauss and Geiser—a total of 112 families presenting several cases of mental disease of the same type, and 44 with mental disease of various types in the same family. Alcoholic cases and those with progressive paralysis are not included in these lists. The largest number of groups including parents and children or brothers and sisters are those of cases of maniaco-depression or dementia præcox. This is probably owing to the fact that such cases are brought to the hospitals and asylums more frequently than the milder forms of mental disorder. In 18 cases of dementia præcox in brothers and sisters there was no history—so far as could be ascertained—of mental disturbance in parents or grandparents. In 17 others the father or mother had presented evidence of some mental affection. As a rule, maniaco-depression and dementia præcox seem to display a like heredity, that is, appear in like form in the descendants. The article is an exhaustive study of the subject and material examined, especially of the details of the psychoses.

114. **Cysts in the Mesentery.**—Three cases of cysts in the mesentery are reported, with a historical sketch of the subject. The points useful in differentiating are reviewed in detail. The cysts generally induce dyspeptic symptoms early, but otherwise have no characteristic signs, the local symptoms being most diverse in different cases, owing to surrounding inflammation and adhesions.

116. **Hernia of the Diaphragm.**—The patient was a woman of 47, who had exhibited symptoms of a stomach affection for about a year, suggesting gastric catarrh and ulcer. Nothing to indicate acute incarceration had ever been observed or anything to suggest a pulmonary lesion, but the heart sounds were weak. The stomach was much dilated—owing to the hindrance to its evacuation—and 2 or 3 quarts of an ill-smelling fluid were withdrawn the day before the operation. Exploratory puncture in such a case, he states, could be done without risk, and it might afford valuable information. In the present case the persistence of the severe symptoms under medical treatment of the supposed ulcer suggested the necessity for surgical measures. The comparatively slow and gradual development of the symptoms and the absence of any history of traumatism are interesting features of the case. The pylorus region was found fixed, with adhesions, in the hernia in the left diaphragm, and an outlet for the stomach contents was provided by a gastroenterostomy. The result of the operation was disturbed by a coincident ulcerous intestinal affection and nephritis, to which the patient succumbed about five months later. The stomach functions had been restored to approximately normal by the gastroenterostomy. If it were possible in such a case to reduce the hernia, he would not hesitate to resect a rib to obtain better access. The patient's rapid improvement after the anastomosis between the cardia and the intestine showed the great benefit of the intervention.

118. **Electro-Chemical Therapy.**—Heüman's experiences with electro-chemical treatment of exophthalmic goiter encourage further work in this line, he thinks. He applies the cathode over the goiter with the continuous current, 25 to 40 milliamperes, similar to Bordier's technic, except that he uses a cathode which contains potassium iodid. In one case, for instance, he applied a current of 20 milliamperes for about twenty minutes a day, the positive electrode on the back, and the negative on the neck. The cathode was placed on a thin sheet of lead, shaped to the neck, over several layers of sterile gauze impregnated with a concentrated solution of potassium iodid, covering the entire goiter. The current was turned on and off very gradually. After a week of this treatment all the symptoms of the exophthalmic goiter had disappeared, and the size of the neck had been reduced from 39.5 cm. to 38 cm. The patient felt perfectly well and has continued in good health since that time—November, 1905. The improvement in another case described was almost equally striking, and in this case iodid was found in the urine five days after the last application. He also detected iodin in gauze under the anode on the back. Other cases from his experience are described and some of the laws of electro-chemistry are cited to explain the phenomena observed.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ESSAYS IN PASTORAL MEDICINE. By A. O'Malley, M.D., Ph.D., LL.D., Pathologist and Ophthalmologist to Saint Agnes's Hospital, Philadelphia, and J. J. Walsh, M.D., Ph.D., LL.D., Adjunct Professor of Medicine at the New York Polyclinic School for Graduates in Medicine; etc. Cloth. Pp. 363. Price, $2.50, net. New York: Longmans, Green & Co., 1906.

EATING TO LIVE, with Some Advice to the Gouty, the Rheumatic, and the Diabetic; a Book for Everybody. By J. J. Black, M.D., Member of the College of Physicians of Philadelphia; Member of the Delaware State Medical Society; etc. Cloth. Pp. 412. Price, $1.50. Philadelphia: J. B. Lippincott Company, 1906.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Edited by W. D. Haggard, M.D., vol. xviii, Eighteenth Session, held at Louisville, Kentucky, December 12-14, 1905. Cloth. Pp. 456. Published by the Association, 1906.

REPORT OF THE STATE CHILDREN RELIEF BOARD. By the President, the Hon. C. K. MacKellar, M.B., C.M., M.L.C., etc., for the Year Ending April 5, 1906. Paper. Pp. 55. Sydney: William Applegate Gullick, Government Printer, 1906.

THE DOCTOR'S SPEAKING TUBE, AND OTHER POEMS. By Katherine Dooris-Sharp. Paper. Pp. 30. Price, 50c. Boston: Richard C. Badger, 1904.

NEW PATENTS.

Recent Patents of Interest to Physicians:

829364. Antiseptic shaving brush. A. Braunstein and A. Rattiner, New York.
829059. Adjustable sick-bed cuspidor. Willard B. Campbell, Jackson, Mich.
828891. Water bottle. Caroline Krueger, Buffalo, N. Y.
829220. Extracting suprarenalin. A. G. Manns and F. C. Koch, Chicago.
829232. Spirometer. Edwin A. Reeves, New Haven, Conn.
829309. Making vanillin. Edward C. Spurge, Niagara Falls, N. Y.
828987. Therapeutic vibrator. Francis H. Vollery, Mount Clemens, Mich.
828908. Bromin-substituted tannin urea derivatives and making same. Arnold Voswinkel and R. Lauch, Berlin, Germany.
829577. Containing vessel for chemicals. August Elmer, New York.
829584. Fumigating system for sleeping cars. Louie Harris, New York.
829790. Apparatus for ozonizing atmospheric air. Edward L. Joseph, London, Eng.
829923. Package for surgical dressings. John E. Lee, Conshohocken, Pa.
829409. Artery and vein expander. John W. Manning, Louisville, Ky.
829481. Invalid-bed. Frederick W. Mitchell, Fort Smith, Ark.
829422. Microscope. Harvey N. Ott, Buffalo, N. Y.
829742. Massage instrument. Wm. G. Shelton, Chicago.
830044. Aromatic ketone and making same. Henry S. Blackmore, Mount Vernon, N. Y.
830416. Invalid knee-rest. Lily H. Cowan, Durham, N. C.
830213. Manufacture of certain aldehydes. Georges Darzens, Paris, France.
829952. Syringe. Walter M. Dean, Chicago.
829986. Medical compound. Jesus M. Mendez, Delrio, Texas.
830761. Drier for casein curd. Lucius Axtell, Rockroyal, N. Y.
830889. Atomizer. Charles J. Davol, Providence, R. I.
830975. Apparatus for producing highly-ozonized air or oxygen. Auguste Dechaux, Paris, France.
830894. Ankle brace and supporter. Albert R. Garrod, New York.
830506. Ferment and producing same. Grove Johnson and P. R. Hare, Bromley, England.
831004. Inhaler. Flora E. and A. D. Jousset, New York.
830608. Fountain eye-bath cup. Francis A. Magill, Tacoma, Wash.
830909. Manufacture of glycerin nitrates. Anton Mikolajezak, Kastrop, Germany.
830626. Vaporizer. James E. Van Ness, Chicago.
830757. Catamenical protector. Clara L. Williams, Chicago.
830552. Water softening and clarifying apparatus. John L. Zeigler, Los Angeles, Cal.
38233. Design. Holder for soda-water tumblers. George C. Lyon, Providence, R. I.
831275. Apparatus for humidifying and cleansing air. John W. Fries, Winston Salem, N. C.
831427. Manufacture of ferrophosphorus. John J. Gray, Jr., Rockdale, Tenn.
831125. Ear-drum. George P. Way, Detroit.